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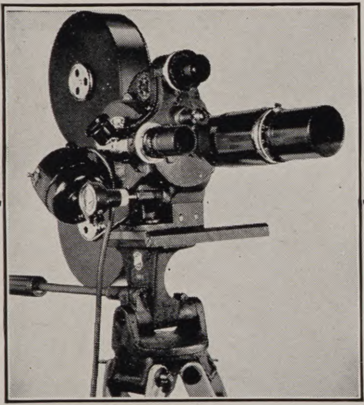

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AMERICAN CINEMATOGRAPHER

A Technical and Educational publication
on motion picture photography.
Published monthly by the

AMERICAN SOCIETY
OF CINEMATOGRAPHERS, INC.
1782 North Orange Drive
Hollywood (Los Angeles), California

Telephone GRanite 2135

VICTOR MILNER, President.
FRED W. JACKMAN, Treasurer.

Vol. 19 October, 1938 No. 10

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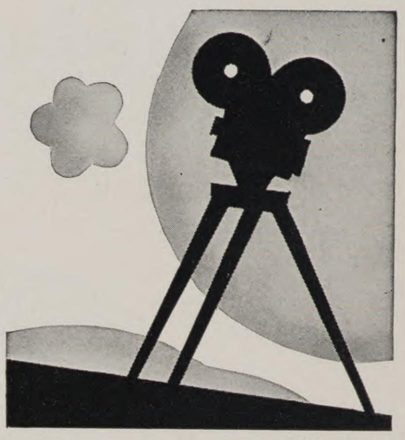
The Front Cover

JAMES STEWART and Jean Arthur as they appear in the Columbia-Frank Capra production "You Can't Take It with You"—a subject which not only was voted the picture of the month but most assuredly also will be one of the strong contenders for the honor of being the picture of the year.

Joseph Walker, A.S.C., directed the photography on the picture. He was second in the honors for the leading camera work of the month.



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AUSTRALIAN REPRESENTATIVE
McGill's, 179 Elizabeth Street, Melbourne, Australian and New Zealand agents.

Neither the American Cinematographer nor the American Society of Cinematographers is responsible for statements made by authors.

ESTABLISHED 1920. Advertising Rates on application. Subscription: United States, $2.50 a year; Canada and the Pan-American Union, $2.50 a year; Foreign, $3.50 a year. Single copies, 25 cents; back numbers, 30 cents; foreign, single copies, 35 cents; back numbers, 40 cents. COPYRIGHT 1938 by American Society of Cinematographers, Inc.

Entered as second class matter November 18, 1937, at the postoffice at Los Angeles, California, under the Act of March 3, 1879.

FATHER HUBBARD IN ALASKA MAKES RECORD FILMING

By MARGARET E. HUGHES
Secretary The Pacific Geographic Society

IN the early summer of 1937 Father Bernard R. Hubbard, S. J., famous "Glacier Priest," left Juneau for a year's sojourn on a tiny island in the Bering Sea. He and his party of scientists were on their way to King Island to study and film its cliff dwellers, a race of Eskimos different from other tribes because they do not live in igloos or even dug-outs, but in cliff dwellings perched on the precipitous sides of their rocky land.

The best way to locate the speck toward which the Hubbard party headed is to find where the 168th parallel of longitude and the 65th parallel of latitude intersect. When you find King Island or Ukiuvok, its Eskimo name, you will see where men and dogs and a hundred tons of equipment were put ashore.

The projects of construction immediately put underway by Father Hubbard and his assistants had the Eskimos wide-eyed with wonder. Comfortable houses were built. A large social hall capable of holding the entire population was put up. Electric light plants, radios and talking pictures were installed, and a year of diversified pursuits began for the scientists.

Staff of Scientists

Kenneth Chisholm was engineer and gunsmith. In addition he made daily records of the ice and current movements valuable to the science of oceanography.

Bernard Stanley, former assistant at Richard Observatory of Santa Clara University, was radio operator. Ed Levin, field manager for Father Hubbard, opened a gymnasium for physical culture correctives among the King Islanders, while Dr. Victor E. Levine of Creighton University was sent on to Point Barrow to conduct research there among the Eskimos to determine the benefits of medicine as compared with Levin's course of physical exercises. Levin, former Santa Clara football star, was admirably fitted to take over his task. The recreation hall was converted into the gymnasium, complete in every detail. And in six months the results were apparent even to the most skeptical.

Flat chested children straightened up and filled out; weaklings became strong, and health and confidence were instilled. Boxers were trained to a point where they equaled any pugilist in their class anywhere.

In football they even had their "Ice Bowl" classic to end the season. And did they love it! The consensus of the population is that this game excelled the best in the history of football.

Candy and a Boy

In the meantime, Father Hubbard made a complete botanical collection of the island flora, assisted by every small boy with a sweet tooth. Candy was the reward for each new specimen brought in. He wrote a commentary and compilation of the King Island language as composed by Father Lafortune in over 35 years among these people.

Mainly, though, the priest was taking motion pictures and stills for a complete pictorial record of the life, customs and surroundings of the island. He took

Father Bernard R. Hubbard, S. J., beloved "Glacier Priest," exposes 100,000 feet of film and 12,000 stills to bring additional geographical and ethnological treasures of Alaska to people of North America.

Little King Islander and her puppies.

12,000 stills and used 100,000 feet of Agfa Plenachrome film.

The stills will illustrate a new book of pictures soon to be published. The movies will be cut and edited under the title "Cliff Dwellers of the Far North" to be used in Father Hubbard's annual transcontinental lecture tour. He opens his season at the Pasadena Civic Auditorium on October 4 and at Wilshire Ebell Theater in Los Angeles on October 5 and 6, under the auspices of the Pacific Geographic Society.

When he completes these engagements he will have appeared for this organization seventeen times in the past seven years—in Los Angeles, Pasadena, Long Beach and San Diego—to a combined known audience of a hundred thousand persons.

Power of Visual Aids

More than any other scientist-explorer, Father Hubbard has used the motion picture to popularize his subject among his layman audiences. His usual lecture schedule is better than 275 lectures in a season in the key cities of the nation, and he returns year after year to the same groups, as in the case of the Pacific Geographic Society.

This is proof of the power of visual aids in educational entertainment. Brilliant and dynamic speaker that he is, Father Hubbard fully realizes the mighty power of the screen, and the material available on King Island for an Eskimo epic was enough to excite the enthusiasm of even a veteran like him.

A mountain rises some thousand feet out of the sea, longer than it is wide, its two extremities extending hornlike above the rest making a saddlelike plateau. Great grotesque "hoodoo" rocks stand against the skyline. Three sides of the island drop sheer to the sea. No beach or landing place exists; only the swells of the Bering Sea constantly rise and fall.

On the sheltered lee, facing the sea is a group of strange dwellings perched on the rocks, tied to the rocks, built into the rocks, forming according to Father Hubbard one of the most interesting villages in the world.

Built on stilts, these houses seem to stand dizzily over space. Their construction is as singular as their site. Drift logs seasoned by time make the walls, roof and floor. Layers of moss insulate the wood. Huge walrus hides are laced with thongs for a covering as water-proof as one can wish.

Usually a community house is grouped about the same stilts. Each family has its own private home from which a tiny opening just big enough to crawl through permits egress to a long shed or common storehouse.

Village of Ukiuvok

From the shed is one large opening leading out to a porch whence a ramp goes down to the stony path which forms the village street. In addition to the houses there are three large kasgas, or dug-outs of logs or rocks where tribal gatherings, games and dances are held and most of the work is done.

At night in these kasgas sleep unmarried young men for whom there would be no room in the small crowded homes. The three kasgas, a government school, Catholic church, social hall, power house, gymnasium and four dozen stilt houses make up Ukiuvok, the village of King Island.

What kind of people make the village? A group of Eskimos unique not only in the type of dwellings they build but unique in their racial beliefs form the population of Ukiuvok. As far back as any history or tradition goes they and their ancestors always have lived there.

Other Bering Sea Islanders have folk yarns in which the world began on their particular island and human beings originated there in some fantastic manner. Not so the King Islander. He considers himself Asiatic; that his ancestors came from somewhere near Unalakleet on Norton Sound or East Cape, Siberia.

This is a rational deduction, for his language is identical with that of Unalakleet and East Cape. Why he should perch on the rocky cliffs of King Island and not migrate to more desirable locations presents itself as a problem to everyone but him.

Food a Life Battle

And when one considers the situation from his viewpoint many reasons can be found to show that he has picked a very desirable location, in fact the most desirable in the far north.

In the arctic and sub-arctic regions the main problems of life is food. While abundant, it is scattered, and this accounts for human beings spreading out in many small isolated groups capable of existing on the food supplies of the immediate vicinity rather than settling in larger communities which would soon exhaust local resources.

In peopling the forbidding north the more aggressive Indian tribes followed the rivers into the vast forested interior and settled where game and fish and a more bounteous nature surrounded them. The more placable Eskimos stuck to the bleak tundra of the Arctic Ocean and the Bering Sea.

The northern seas are as prodigal in

EDITOR'S NOTE: Father Hubbard is the first speaker in the "Globe Trotter" series of the Pacific Geographic Society, a six-event course combining speaker and motion pictures dealing with exploration, science and world travel. Alaska, Guatemala, the Amazon, Africa, Mexico and Australia will be seen during the 1938-9 season through the still and motion pictures of the lecturers at the Pasadena Civic Auditorium and the Los Angeles Wilshire Ebell Theater.

marine life as the great bodies of water in other parts of the world. The economic structure of Eskimo life did not need iron, or copper, oil, coal or other basic products for which nations spill blood. Ivory and whalebone took the place of metals and wood. Animal and fish oils supplied heat energy.

The skin of sea animals supplied clothing and coverings for boats and houses, while the multitudinous life of the sea afforded food in abundance. In the short but intense summer many varieties of edible greens and berries gave them necessary vitamins.

Berries and Greens

Migratory birds by the millions left eggs for a change of diet. Taken all in all, the Eskimo and particularly the King Islander could live and even enjoy life according to his standards.

When the long spring days begin to advance toward the twenty-four hour daylight of June and July, the plateau top of King Island, the grassy nooks and crannies of the rocky sides become covered with a vigorous and diversified vegetation. Several varieties of excellent edible greens are collected to be eaten fresh or stored away for winter use, some dry, some in water, some in seal or walrus oil.

May kinds of berries are gathered and preserved for winter use. All the eggs that can possibly be used are gathered without diminishing in the least the hundreds of thousands of birds which return each spring. Contrary to popular notions, these sea birds make excellent eating, even young gulls, murres and sea parrots.

Apportion the Kill

From the sea the native takes huge cod and bullheads, enormous crabs and all sorts of smaller fish. Shrimps can be obtained in abundance any time one wishes to go out and get them. Edible sea weeds are occasionally gathered for variety.

Seal, oogruk and polar bear come with the winter, and every day the men sally forth to hunt on the pushing, breaking, evermoving ice. Arriving at a lead of open water, the islanders wait on the unsteady ice for a seal or oogruk to come to the surface to breathe. Then they shoot.

With a thong tied through the animal's head and a broad leather harness across their own chests they drag home their kill. Sometimes their dogs do the job for them. At the base of the island cliff wait the women, ever on the watch for their husbands' return.

Dragging the carcass into the shed which forms an integral part of their house, they carefully butcher and apportion the animal to all its proper uses. The skin is for clothing or mukluk tops. Mukluks are fur-lined boots. The dried intestines make a parchment-like waterproof parka. The meat becomes food.

Polar bears are not so very numerous and they begin to appear in mid-winter, moving with the arctic ice. The islanders slay about a dozen in a season to sell the beautiful white hides for a paltry sum. For to them the polar bear is insignificant, while the real basic necessity of their economic existence is the huge walrus herds that follow the breakup of the ice and in the spring come down from their native Siberia in herds of many thousands.

Then the natives work day and night, pushing out to sea in huge *oomiaks* or skin boats capable of holding a dozen men and several tons of freight, to seek the animals spotted from lookouts atop the island.

Grounding their boats to the nearest cake of ice at the scene of action, the hunters, clad in white parkas for the sake of camouflage, creep toward the herd. At a signal they shoot. Then with feverish haste, for time is an important factor they start cutting up the slain beasts.

Tusks Most Valuable

Most valuable are the ivory tusks. The hides of the younger bulls come next. They make the best roofs for their houses, hulls for their boats and a variety of receptacles and utensils very ingenious in their construction. The meat is a prized food.

The "Great Hunting," as the short walrus season is called, is so intense that it would be difficult to keep all the meat were it not for another great natural advantage of the land, an immense cold storage, the like of which exists on no other island in the Bering Sea.

A cleft in the side of the island goes up and back a few hundred feet. There are many smaller adjoining chambers, ice covered from seeping water and permanent the year around. In these caves surplus meat is stored and keeps fresh for years.

Against the possibility of starvation from lack of game, the King Islanders keep their storage plant stocked with at least a year's supply of frozen meat.

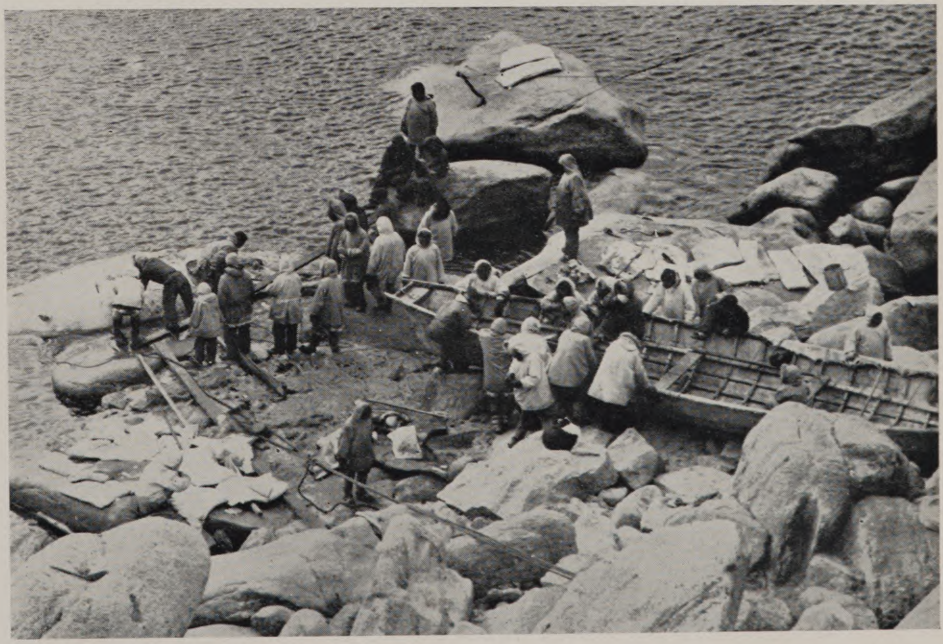
In other islands of the far north fresh water often becomes an acute problem. But not on King Island, for here springs and seepages from the plateau island top form a lively stream which dashes alongside the village to the sea. Even in the driest summer, water is always obtainable, which probably accounts for the great cleanliness of the people.

Luxuries Bring Sickness

Accounts of the early navigators and explorers picture the King Islander as they found him in his primitive state. Essentially he lives now as he lived then, on the spoils of the sea. But the gradual approach of civilization and education of the white man has changed his life considerably. He is fast losing his independence.

In imitating the white man's life and adopting the white man's food and customs, he is acquiring habits and sicknesses unknown in his primitive state. Particularly do his lungs and teeth suffer by the change.

Though skeletal remains show the King Islander as a sturdy man in primitive times, very little is known of his ancient history. Having no written language,



Hunters have brought in a whale. This gives excellent view of huge oomiak, or skin canoe.

King Island dwelling clinging to rocky hillside.

his history is passed on by oral traditions which usually hinge upon important events. Two such events chronicle the advent of the twentieth century.

Today the B. C. and A. D. of Eskimo chronology is before and since the great plague of 1900, which almost annihilated the race. Mysterious and still unexplained by medical science, a dread disease spared the whites and took only the natives.

It spread over the new world adjacent to the Bering Sea and the Arctic Ocean and carried off its victims so suddenly and so fast that the living could not bury the dead. Over two-thirds of the race perished. Before the plague there were villages at the mouth of almost every river, upon every cape and one or more on every island.

When the plague passed, whole villages had disappeared, leaving not a single soul. Sledge Island, second only to King Island in natural advantages, was left without inhabitants. Cape Wolly, Sinarok, Cape Douglas and many other sites on the mainland were completely wiped out.

Death Rate Ties Birth

Of the seven villages on great St. Lawrence Island, only a small one remained. King Island, with a large thriving central village and two smaller offshoots, had 300 inhabitants before the plague. Fifty survived.

The village of Ukiuvok now has a population of about two hundred, but the extremely hard life and the fact that the natives are all afflicted with tuberculosis keeps them from multiplying. The birth rate is high, but the death rate evens it up, and at best the King Islanders are just about holding their own.

In other respects the people are very strong and healthy, living to quite advanced old age. No diabetes, no venereal disease, cancer or hardening of the arteries has ever been specifically known among them.

They have never had a resident doctor or nurse, so the well being of the people is the more remarkable when one considers that the present chief of the tribe is doctor, dentist, surgeon and midwife all in one. In the past fifty years there has been but one single mortality in childbirth in over twelve hundred cases.

But the death rate among young children is alarming, and they are in great present need of better physical build-up. In fact, they have been steadily becoming weaker and less resistant with the years.

The most important event from an economic and cultural standpoint in the existence of the King Islanders came at the turn of the century with the arrival among them of a young Canadian Jesuit.

One of a family of 14 children raised on a Quebec farm, Bellarmine Lafortune received his education at the local College in Winnepeg, later at Montreal, and so great was his aptitude for mathematics that he was sent to the University of Paris for special studies in this subject.

Greatness in a Hamlet

Returning presumably for college work in Canada, a vocation nearer to his heart came unexpectedly. Alaska was being opened as a mission and volunteers were requested. Father Lafortune applied, was accepted and was immediately on his way to the mining camps of Nome.

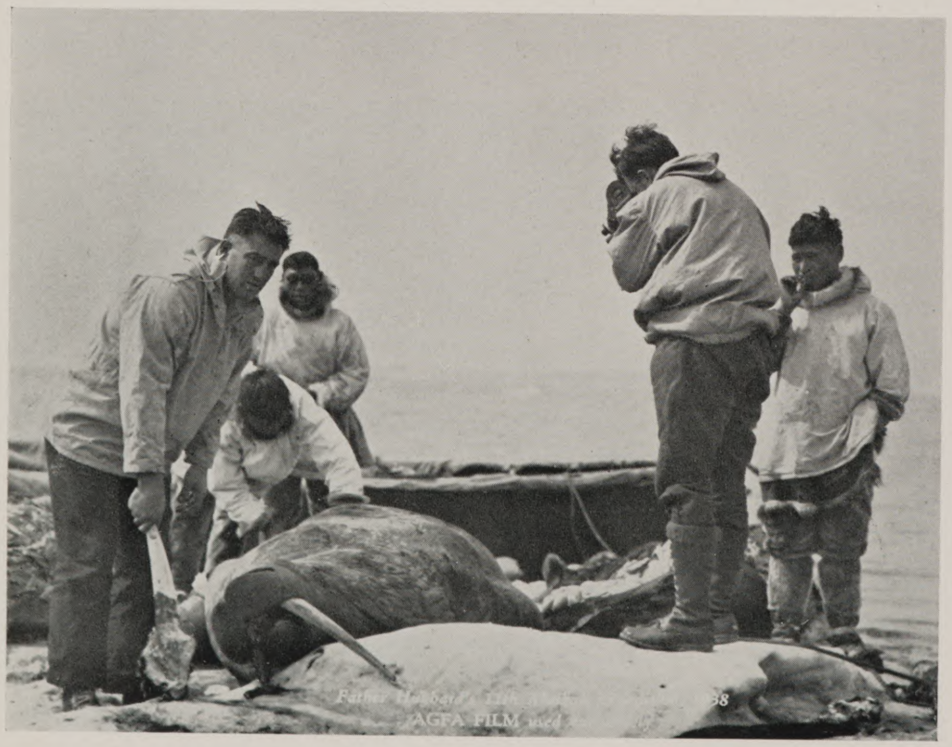
Here he met his first King Islanders. He continued on to their island, and for thirty-five years has never been away. Not once has he taken a trip either to his native Canada or to the United States, but has made his life all these years one of unselfish service to these people in the bleak Bering Sea.

He soon mastered their language until he spoke it better than they. He made their life and problems his. He saw the future value in the walrus ivory which they were then using only for crude tools and implements, throwing most of it away. He taught them the rudiments of carving.

Entire Populace Migrates

Oriental like, they were quick to learn. Soon they became so proficient that in the course of years the demand for their carvings exceeaed their ivory supply and King Island has become known to

(Continued on Page 410)



Father Hubbard using his Eyemo on Eskimo as he works over walrus.

Dr. Joseph Gevaert, managing director Photo Produits Gevaert S. A. and son of that company's founder as well as president of Gevaert Company of America Inc.

FLASHING ACROSS NEARLY SIXTY YEARS

By Dr. Joseph Gevaert

From the Manchester (England) Guardian Commercial

With the tremendous development of photography since the war and its position in so many different spheres of human activity, photographic manufacturers have been faced with a number of complicated and widely differing problems.

It was about 1880 that the photographic industry, as such, came into being; before then photographers were obliged to prepare their own plates and papers.

Before the Great War photography was chiefly devoted to portraiture and illustration, while also serving as a hobby to a number of amateurs, still comparatively small.

The war brought about new applications and drew attention to the countless possibilities of photography, but it was only after 1918 that the industry started to make progress.

When cheap cameras were introduced the number of amateurs increased considerably. But the cameras, with their comparatively weak lenses, called for the manufacture of faster emulsion, a demand that could be satisfied without much difficulty.

However, trouble occurred a short time later, when amateurs began to abandon large sizes and give preference to lighter and more compact cameras, leaving the finisher to enlarge their negatives to the desired size.

Immediately a grave defect was found in the rapid emulsion, which had hitherto given entire satisfaction. The grain of the emulsion had so far remained unnoticed, but it assumed impossible proportions when enlarged, for the increase in speed had been achieved only by sacrificing the fineness of the grain.

Sheppard's Discovery

The merit of having discovered a means of overcoming this difficulty belongs to the American scientist Sheppard, who in 1925 proved that the presence of certain sulphur particles in the gelatine will increase the speed of the emulsion without detriment to its other features, and a judicious choice of the appropriate gelatine enables the manufacturer considerably to increase the speed of his emulsion.

From 400 H.&D. at the outset, it increased, five years ago, to 650 H.&D., then to 1,000 H.&D., and today it has reached speeds ranging from 2,000 to 8,000 H.&D.

The increase in speed, however, brought with it still further problems. It was noticed, among other points, that when the speed was forced the latitude decreased in proportion. And for amateurs—especially for beginners—this characteristic in the emulsion is of the greatest importance.

The difficulty was eventually overcome by making improvements in the coating plants, and more recently by the manufacture of emulsions with several distinct coatings of different speeds, and also by the addition of such chemicals as sodium nitrate.

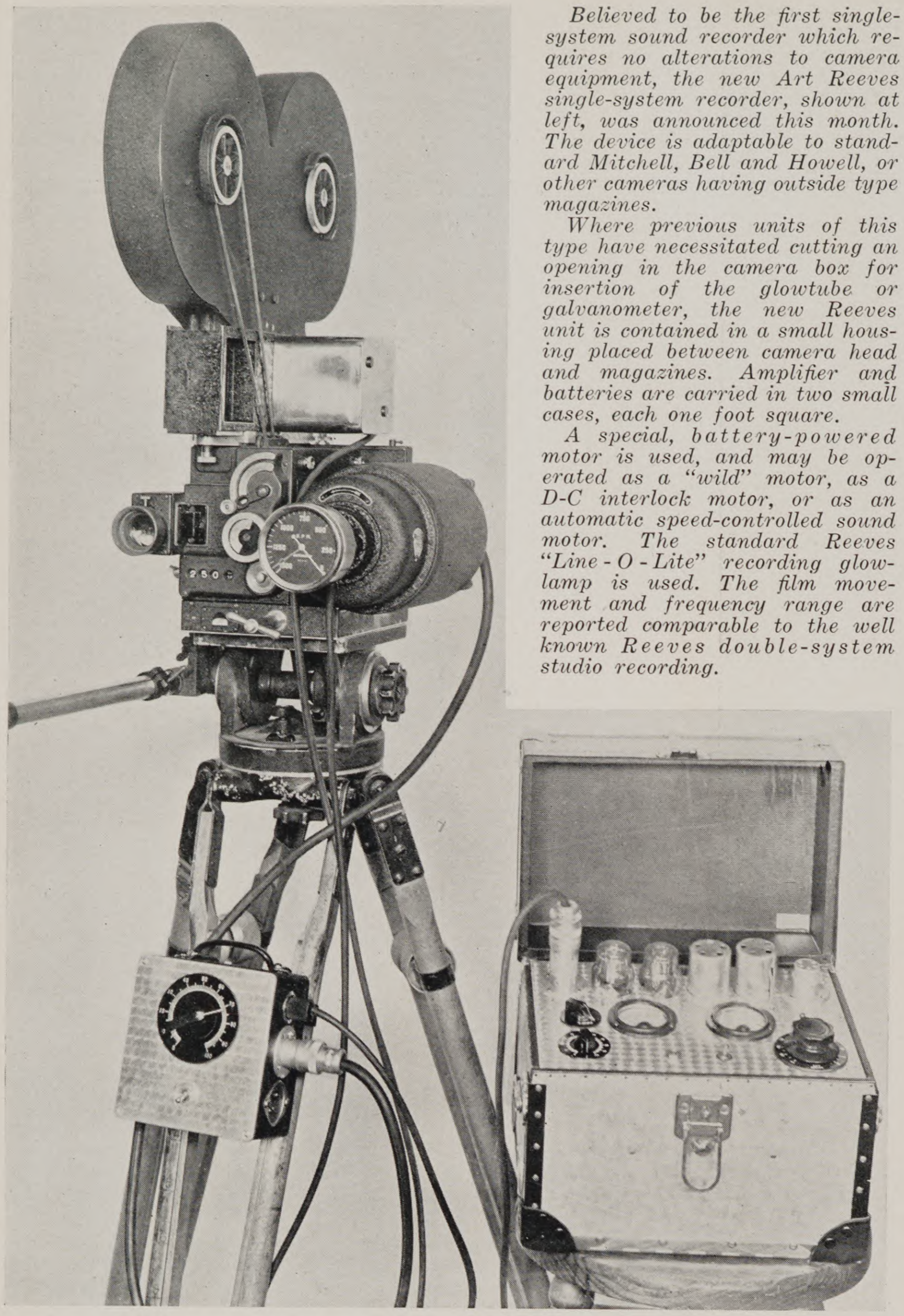
It may even be asserted that the ultra-rapid emulsions made at present have a latitude at least as extensive as the slower emulsion supplied twenty years ago.

Color Sensitive Films

While they were engaged in increasing the speed the photographic manufacturers approached the task of sensitizing the emulsions to all the rays of the visible spectrum by incorporating in them certain special coloring elements which imparted greater sensitivity to the affected parts of the silver bromide.

Thus the color-sensitive plates and films were produced—orthochromatic (sensitive to blue, green, and yellow) and panchromatic (sensitive to blue, green, yellow, and red).

The material proved a boon whenever there was a need to render colors accord-



Believed to be the first single-system sound recorder which requires no alterations to camera equipment, the new Art Reeves single-system recorder, shown at left, was announced this month. The device is adaptable to standard Mitchell, Bell and Howell, or other cameras having outside type magazines.

Where previous units of this type have necessitated cutting an opening in the camera box for insertion of the glowtube or galvanometer, the new Reeves unit is contained in a small housing placed between camera head and magazines. Amplifier and batteries are carried in two small cases, each one foot square.

A special, battery-powered motor is used, and may be operated as a "wild" motor, as a D-C interlock motor, or as an automatic speed-controlled sound motor. The standard Reeves "Line - O - Lite" recording glowlamp is used. The film movement and frequency range are reported comparable to the well known Reeves double-system studio recording.

ing to their respective depths, and it was soon in general use.

Professional photographers noticed that the new emulsions which had just been made available not only gave a better rendering of all colors—and by this very fact reduced retouching to a minimum—but that it also had the advantage of shortening exposures in artificial light. Panchromatic emulsions also revolutionized cinematograph studio technique.

Amateurs, for their part, soon recognized the advantage of color sensitive emulsions, and in the printing and kindred trades panchromatic emulsions became extremely valuable.

Micro-photography, aerial photography, astronomical photography, and, generally speaking, all the sciences that make use of photography in their research work have derived a considerable measure of assistance from the new materials.

Photographing 292 Miles

The investigations of the photographic industry have not, however, been confined to the visible spectrum. After the panchromatic emulsions new emulsions sensitized to infra-red rays appeared, and it was due to this invention that the American airman Captain Stevens was able to photograph the Andes over a distance of 292 miles. The photograph clearly showed the earth's curvature.

This wonderful scientific achievement established everything expected of the new invention. Since then research has been progressing in the laboratories of the large photographic works all over the world with a view to sensitizing emulsions for the specific portions of the visible spectrum.

Great strides also have been made in the manufacture of photographic papers. When roll films and miniature-camera films became so popular, calling as they do for the development of several negative at a time, complications immediately appeared in the positive process, and in order to enable the amateur to make use of the incorrectly exposed negatives a range of contact and enlarging papers had to be created in different grades of contrast.

Thus amateur papers were produced in three, then in five, and finally in seven grades of contrast.

The introduction of automatic printing machines brought with it the thorny problem of stabilizing all the characteristics of the emulsion. Then the chromium glazing and drying machines appeared, threatening the consistency of tone and contrast of the prints.

These problems were not the only ones to be solved. The changing taste of the public, the evolution in artistic ideas, all made still further demands on the photographic industry, and, in order to hold their own in the face of competition, the manufacturers of photographic materials found themselves compelled continually to turn out striking new products: new surfaces, papers giving entirely new tones, tinted bases, additional grades, and so forth. In a few years an assortment of papers had been created answering the most varied and exacting requirements.

Precision Instruments

It will readily be appreciated that so much progress could only be achieved by dint of a thorough reorganization in all working methods.

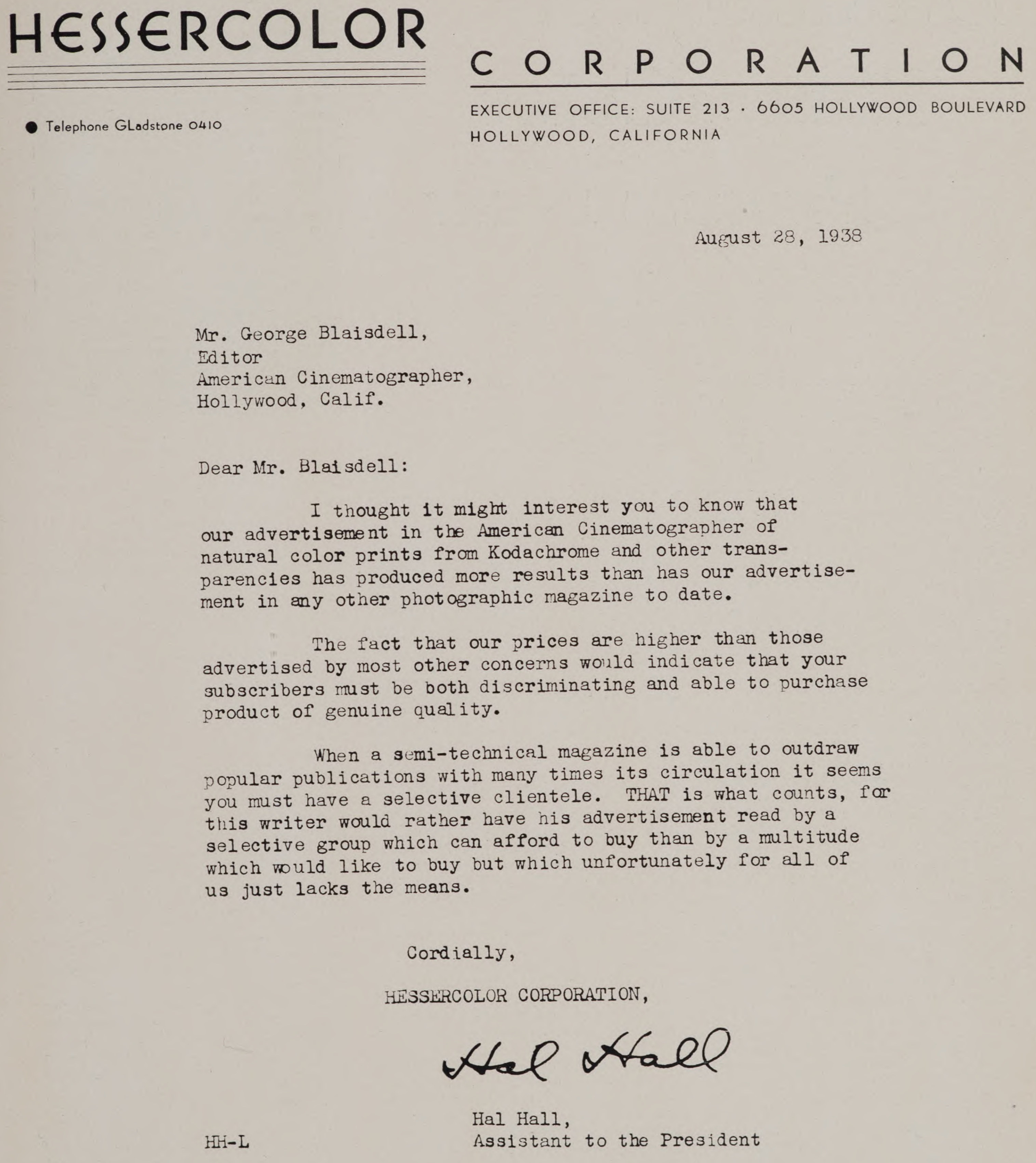
Thus it became necessary to lay down in every detail whole plants to deal with the new requirements. The use of precision instruments soon became general for testing the emulsions and the raw materials used in their preparation. Sensitometers and spectographs, previously used in research laboratories alone, were permanently installed in the testing laboratories. Stalagmometers (instruments to measure the surface tension), ionometers (to determine the pH), microscopes, and many other precision instruments every day render invaluable services.

▼

How Danes Spend Theater Fees

According to a report just received from the office of the Commercial Attache at Copenhagen, Danish motion picture theater owners paid fees totaling Kr. 77,000 to the government in 1937. Of this amount Kr. 55,000 will be divided among various social service organizations and Kr. 10,000 will be used to produce a traffic propaganda film.

The surplus of the Danish film censor totaling Kr. 87,000 for 1937 will be distributed as follows: Kr. 70,000 Danish Cultural Film for the production of an educational film; Kr. 10,000 for a propaganda film showing fire preventive measures and Kr. 7,000 for a film about Danish radium stations.



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EXECUTIVE OFFICE: SUITE 213 · 6605 HOLLYWOOD BOULEVARD
HOLLYWOOD, CALIFORNIA

August 28, 1938

Mr. George Blaisdell,
Editor
American Cinematographer,
Hollywood, Calif.

Dear Mr. Blaisdell:

I thought it might interest you to know that our advertisement in the American Cinematographer of natural color prints from Kodachrome and other transparencies has produced more results than has our advertisement in any other photographic magazine to date.

The fact that our prices are higher than those advertised by most other concerns would indicate that your subscribers must be both discriminating and able to purchase product of genuine quality.

When a semi-technical magazine is able to outdraw popular publications with many times its circulation it seems you must have a selective clientele. THAT is what counts, for this writer would rather have his advertisement read by a selective group which can afford to buy than by a multitude which would like to buy but which unfortunately for all of us just lacks the means.

Cordially,

HESSERCOLOR CORPORATION,

Hal Hall

Hal Hall,
Assistant to the President

HH-L

Dunning Has Three-Color Process Now Ready to Go

Carroll Dunning

THE three-color Dunningcolor process, rumored for several years, is now ready for general use according to announcement made this month by Carroll Dunning of the Dunning Process Company. In addition to the interest inevitably attaching to any new contender in the three-tone color field, Dunning's announcement reveals interesting technical and economic aspects together with a radically new approach to the problem of handling the processing of color film in major studio volume.

The new three-color process is a logical outgrowth of Dunning Process Company methods, which in themselves have been proved over a period of years in commercial use.

Filtering Overcomes Weakness

The Dunning three-color camera uses a single standard Mitchell or Bell & Howell movement, with two apertures, driven from a common camshaft. Through one aperture runs a single super-panchromatic film. Through the other runs a standard bipack.

By means of the patented Harrison multichrome beam-splitting unit a Bausch & Lomb "Raytar" lens produces the two necessary, selectively filtered images.

A notable feature of the three-color Dunning camera is the visual color balance control by which the cinematographer is enabled to adjust the filtering system to compensate for any light conditions.

Filters Graduated

The focusing system of the camera recombines the selectively filtered images produced by the beam splitter and gives a single image on the ground glass. The filters used are graduated. They may be adjusted instantly at any time, to suit the needs of any given scene.

In practice a reading is taken on a white card. If the lighting conditions are such that the card does not appear perfectly white on the ground glass the color balance control is manipulated until the filters are so balanced that the card appears white on the ground glass. When this is done the system is accurately balanced to the conditions involved.

This not only makes it possible to compensate for variations in the color of natural lighting on exterior scenes, but also to adjust the process to the use of any type of artificial lighting. Either arc or incandescent lighting can therefore be used with equal success.

However, Dunning points out, arc lighting is considerably more efficient for any type of natural color cinematography. Incandescent light sources, as is well known, emit an excess of red and infra-red light which must be absorbed by filters either on the lamps or in the camera, and thus wasted.

Modern arcs, on the other hand, give light which is inherently much more closely matched to the natural "daylight white" standard, resulting in a higher proportion of usable light on the set.

Printing Strictly Photographic

Printing in the Dunningcolor process is a strictly photographic operation. Standard double-coated positive stock is used, two images being printed on one side of the film, the third on the opposite side. This is an extension of methods used by Dunning for several years in two-color printing of both 35mm. and 16mm. film.

The red and blue images—the two most important in definition—are printed together on the front surface of the film. The yellow image, which has least effect upon definition, is printed on the rear surface.

These operations, Dunning states, can be performed in any black-and-white laboratory with only a minimum of special equipment. This makes feasible Dunningcolor's radically new method of providing laboratory service for major studios.

"In the past," declares the senior Dunning, "color processing, and especially color printing, has been an exceedingly intricate and delicate operation. As such it was necessary that all processing of films photographed by any color process be centralized in a special color laboratory controlled not by the producer, but by the color company.

Laboratory Simplicity

"When a number of producers use the same color process, this necessitates intricate scheduling of laboratory work which may not always prove convenient to the producer, and can cause expensive delays in production.

"The simplicity of the new three-color Dunningcolor process, while still requiring a moderate amount of special equipment and methods, eliminates the need for a centralized color laboratory. Therefore it is our plan to have Dunningcolor negative processing and color printing done in the producers' own laboratories.

"This can be done very economically. Recently experts from one of the major studios have been studying our process with a view to adopting it. One of their first questions was as to the cost of installing in their own laboratory color equipment sufficient to give them what they considered adequate capacity for their needs. They began by asking us.

"After surveying the situation, they ended by telling us what they knew it would cost them. By their own figures color machines capable of handling a substantial yearly output of color positive could be added to their existing equipment for a very moderate cost.

"The Dunning Process Company's present laboratory has been completely re-equipped as a three-color plant, with an annual capacity of between five and six million feet of three-color positive. This plant will be used to handle commercial processing of advertising, commercial and cartoon films.

In addition, it is to serve as a model for major studio laboratory guidance and as a research laboratory in which the process will be constantly improved. Due to its use for commercial processing, this research plant will not con-

(Contiued on Page 416)

M-R Introduces Duarc

New automatic broadside

ANNOUNCEMENT of a new twin-arc general lighting unit by the Mole-Richardson Company indicates continued advancement in the field of arc lighting equipment. The unit is known as the Duarc. It replaces the firm's Side Arc introduced less than five years ago.

The latter unit was the first piece of modern arc lighting equipment developed to meet the requirements of the three-color Technicolor process, and was regarded as a revolutionary advance over the twin-arc broadsides of silent picture days.

The Duarc is held to be equally revolutionary. Not only does it give a smoother and almost perfectly flickerless light of high intensity but it solves an important production problem—that of delays while the many Side Arcs and overhead Scoops are retrimmed—by an exceptionally long burning period.

Fully automatic in operation, the new lamp, which can be used interchangeably for floor or overhead lighting, with reasonable care, can be burned a full working day on one or two trims of carbon.

To attain this longer burning period and more uniform light-flux an abrupt departure from traditional design was necessary. Purely mechanical carbon feeds, whether continuous or intermittent, would not solve the problem; for each arc must be fed in direct proportion to the rate at which its carbons were consumed. Each would have to be struck and fed individually.

New Mechanism Developed

To meet these requirements, an entirely new type of carbon-feed mechanism has been developed. In the Duarc these mechanisms are in duplicate. Though electrically interrelated, each arc having an individual feed mechanism, while the arcs themselves are in series.

The resistance of each arc gap governs the action of the mechanism feeding that arc, assuring a carbon feed directly proportioned to the needs of the arc.

The result is a lamp which is held to be the longest-burning and most nearly flickerless twin-arc broadside unit ever made. The Type 29 Side Arc which the new unit supplants had a miximum burning period of forty minutes without retrimming. The new Duarc will burn for slightly over two hours on a single trim.

Under the average conditions of production, this means that these new units can, if reasonable care is used in switching them off during non-productive periods, be burned on a single trim for a full working day or, at most, require retrimming only at the midday break for lunch.

The advantage to production, especially where these units are used as overhead floodlighting units, and are thus not easily accessible, will be obvious.

This economical feed is secured by a special slow speed electric motor driving mechanism. The motors turn very slowly, requiring only 600 revolutions completely to feed the average trim of carbons. The design is such that the carbons are burned with remarkable efficiency, burning down to stubs less than three inches in length.

Throw Single Switch

The same mechanism serves as an automatic striker. The Duarc is turned on as easily as any incandescent unit. A single switch is thrown; the automatic striker starts the arc and thereafter maintains it at optimum efficiency until the trim is consumed or the lamp turned off. Batteries of these lamps may be operated by remote control, requiring virtually no attention.

The smoothly automatic feed also results in a lamp which burns almost entirely without flicker. Only the most sensitive photoelectric recording meters have been able to detect any irregularities in the lightflux of the new Duarc. These irregularities are not sufficient to be visible even to the color camera.

The reflecting system of the new lamp is an efficient shell of polished metal, with ample openings for ventilation and the escape of fumes. The motors and carbon feeding mechanism, both mechanical and electrical, are placed well away from the arc and thoroughly heat-insulated.

So carefully have ventilation problems been provided for in this design that the rear door of the housing, which gives access to the mechanism, is screwed shut and need seldom, if ever, be opened on the set.

An important new development is also noticeable in the front of the lamp. As is usual with all modern arc units, the light is filtered through an ultra-violet absorbing glass window. In the Duarc this window is in the form of a diffuser of frosted Pyrex heat resistant glass. The use of this material, new for such purposes, brings a distinct advantage.

Mount Diffuser Closer to Lamp

Being heat resisting, the diffuser can be made in one piece rather than in the form of a number of relatively narrow strips. This gives greater efficiency as a diffuser and better protection from the escape of ultra-violet rays.

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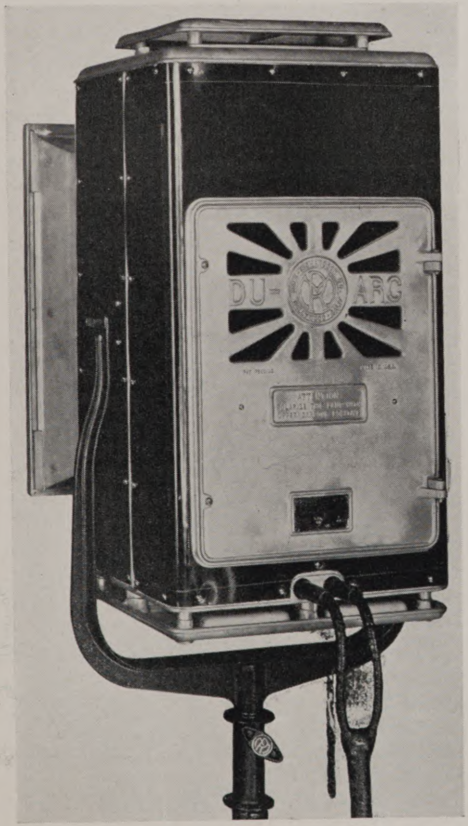
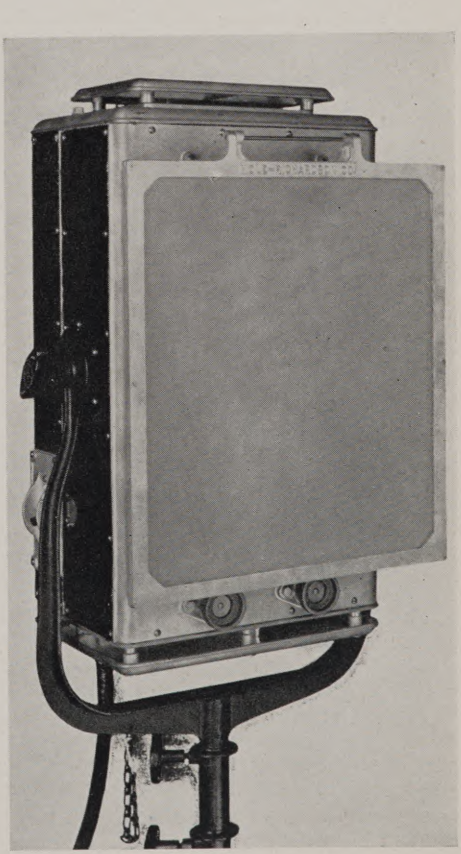


Front view of Mole-Richardson's new Duarc. Note new single pane Pyrex diffuser in tight fit mount.



Rear view of new Duarc. This new twin-arc unit, which has burned a single trim more than 2½ hours without attention, can be used interchangeably as a broadside or overhead unit.

Ingenious Accessories Simplify Making of Special Effects Shots

By George Teague

Head of Special Effects Department, Universal Studio

THE subject of accessory equipment for special effects cinematography has seldom been given much discussion. This is logical, for most of the accessories of this type were developed individually, to meet some specific need, and then accepted into daily use as a matter of convenience. In consequence, most special effects cinematographers have become so accustomed to these devices that they take them as a matter of course.

It would appear, however, the subject advantageously could be brought into the open. The fundamental methods and equipment used in the various special effects processes have become to a surprising extent standardized. Revolutionary advances can hardly be expected.

Detail improvements are taking place all the time, to the end that special effects scenes may be made either more effectively or more efficiently. And important, if unnoticed among these detail improvements, are the improvement and innovations in accessories which enable the men on the set to do their work with greater facility.

It is for this reason that I take the liberty of discussing a few accessories which we have for some time been using at Universal. Most of them are little things, but they have enabled us to do commonplace things more easily or to better effect.

One of the most common difficulties of projected background process work is the problem of focusing the background projector on the process screen. It is difficult for the projectionist to determine whether or not his picture is focused satisfactorily for the composite camera in front of the screen.

Saver of Time

Ordinarily a surprising amount of time is wasted in telephoning back and forth from the set to the booth, to get the focus adjusted correctly.

We have developed an electrical, remote control focusing device by which the projected image can be focused directly by the crew on the set. It is a simple little mechanism. A small electric motor is fitted to the projector, revolving the focusing mechanism of the lens, which it drives through a worm gear.

This type of gear, as is well known, will drive a spur gear, but it cannot in turn be driven by the spur gear. Thus the lens is moved only when the motor operates; as soon as the motor stops the system is locked.

A single cable leads to the set, where two push button controls are provided: one to start the motor forward and another to reverse it; releasing pressure on either button stops the motor. With this control in his hands, the cameraman on the set quickly and easily can focus the background image himself. Since the motor is a light, slow speed one, it does not "coast" and alter the focus after the stop button is pressed.

Another minor problem sometimes comes when making process shots in which the actors walk in front of a trucking background scene. There are none too many really good treadmills available, and these are not always either convenient or precisely controllable.

For such shots we have developed a turntable. It is simply a rotating platform of ample size, which may be rotated as desired either manually or by a variable speed electric motor.

Creating Shadows

Naturally, the background screen may be suspended over this turntable at any desired angle, so that the players may walk toward the camera or apparently across the screen. The turntable is compact, and economical of stage space; it may be used in shots where the use of a regular treadmill might be inconvenient. It is of course silent, and perfectly controllable.

A similar problem comes in making such shots as those of players apparently inside a moving automobile, where in addition to the moving background on the screen the effect of motion is heightened by moving lights and shadows —as the shadows cast by trees or buildings apparently being passed by the car —cast on the players. This is of course done by moving cut-out silhouettes of the desired pattern in front of a strong spotlight.

Ordinarily some type of revolving drum or disc is used; most frequently, a drum revolved completely around the lamp. This does not always give convincing variety, and is also somewhat cumbersome and inconvenient.

Our device for this purpose consists of a suitable, wheeled support, adjustable for height, upon which are mounted two pairs of bicycle wheels, each pair being connected by an endless, flexible belt. To these belts may be fixed any desired number of clamps, into which cardboard cut-outs of the desired shapes and sizes may be clamped. The whole device is driven silently, by a reversible motor. Any necessary speed may be maintained consistently, which is not always the case with manually operated devices.

Flexibility Appreciated

The flexibility of the device can readily be appreciated. The shadow patterns easily can be adjusted to suit any required effect. So, too, can their number, location and speed.

The effects are subject to infinite variation with little trouble or expense; actually, we generally utilize the title department's discarded title cards for our cut-outs.

A helpful accessory in making this and many other types of special effects shots is a mounting developed for an H.I. Arc spotlamp. Atop a regular lamp tripod we constructed a counterbalanced crane arm, at the outer end of which the lamp is carried.

Not only does this permit us to use a spotlamp in position where we could not otherwise do so, but it saves time much as a camera dolly does, for the lamp can often be moved without having to move the entire stand or a bulky parallel.

For background shots which do not require exceptionally large screens—as for example scenes in a closed car, or airplane—we are experimenting with the use of incandescent lamps instead of arcs in the projector. We have built a lamphouse, interchangeable with the regular arc lamphouse, but housing instead a 2000-watt projection globe, with an appropriate optical system.

The screen used is of a special cellulose material having a slightly pinkish cast. The results so far have been quite satisfactory, and the use of incandescent rather than arc light for these small-screen shots should result in a saving in carbons and in the time spent in retrimming carbons.

Our latest development, which we hope to have in use by the time this is printed, is designed to eliminate the need of a bulky projection booth. The projector will, instead, be carried on a special wheeled carriage, somewhat similar to some types of tricycle-type rolling tripods.

The projection head itself will be completely blimped in, inclosed in a compact metal blimp, sound-proofed much as our camera blimps are. The lamphouse will be external, and movable in relation to the projection head.

(Continued on Page 410)

KING OF FILMS

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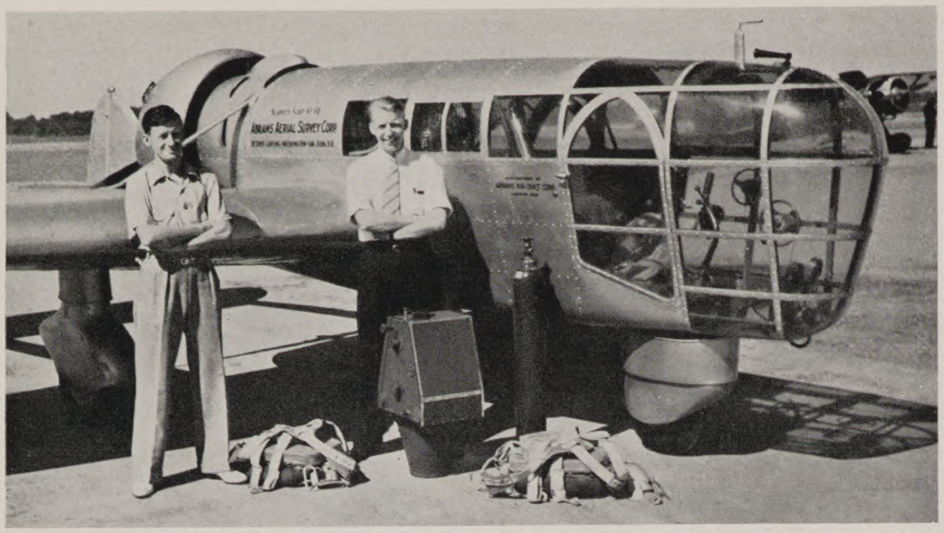


The new Abrams aerial camera is here shown in front of the Explorer, photographic mapping airplane for which the camera was especially built. Although the camera was designed to take advantage of the high speed of the Explorer, it may be used in any type of plane.

CAPTAIN MULKEY, U.S.A., COMES TO STUDIOS

THE sixth United States Army officer to be sent to Hollywood to study under the cooperative officer training program carried on between the War Department and the Research Council of the Academy of Motion Picture Arts and Sciences, Captain Dwight L. Mulkey of the Signal Corps, arrived in Hollywood September 24 to begin his study of motion picture studio production problems.

Captain Mulkey is a graduate of West Point, 1928, and comes to Hollywood direct from a several months tour of duty at the Signal Corps Photographic Laboratory in Washington. Previous to that time he was in Panama for three years.

Captain Mulkey holds a master's degree from Yale University, and has studied as a student officer at the Rochester Athaneum and Mechanical Institute. He is also a graduate of the Army Signal School and comes to Hollywood well grounded in engineering and technical theory.

Major Fred W. Hoorn, the first of the army officers to receive this studio training, who completed his course in 1931, is now in charge of an army training film production unit at Dayton, Ohio, and Major M. E. Gilettee, who also completed a course of training under the Academy's direction, is in charge of another field unit at Fort Monmouth, N. J.

The remaining officers who have previously taken this training, Captains Richard T. Schlosberg, Charles S. Stodter and W. W. Jervey, are all engaged in the production of army training film at the Signal Corps Photographic Laboratories in Washington.

In addition to spending some six months in the studios, studying all phases of motion picture technique, the training course includes several weeks study of the various types of motion picture equipment. The first two weeks of Captain Mulkey's stay in Hollywood will be spent in the plants of the Eastman, Dupont and Agfa Film companies, studying the handling of the various types of raw stock film used in picture production, followed by a period of several weeks to be spent with the sound equipment companies, where he will learn the details of the ERPI and RCA sound systems.

Organization of the officer training program is under the direction of Major Nathan Levinson, vice chairman of the Academy Research Council, and Gordon S. Mitchell, manager of the Council.

▼

Ingenious Aids Simplify Special Effects

(Continued from Page 408)

An unusual feature will be semi-automatic operation of the projection movement. This can be controlled either by the operator at the projector or by the crew on the set. In addition to the remote control focusing mechanism already in use, it will incorporate features which make it unnecessary to touch the projector once the film is threaded.

The crew on the set not only control its normal operation but are able to reverse it at the end of a run, eliminating the usual waits for rewinding and rethreading the film. If necessary, tests can be run while the film is rewinding.

This new installation, incidentally, will bring our department to full standardization of movements. Cameras, optical printers and projectors will be fitted with interchangeable, Bell and Howell type pilot-pin movements, one set registering on an upper perforation, the other on a lower one, as may be necessary. The moving parts of these movements are made of Dural and similar light alloys, minimizing the weight of moving parts.

With the exception of this latter device, none of those I have mentioned can be called of major magnitude, but they have proved useful. It is of course easy to see that a projector which minimizes rewinding delays and which can be controlled and focused from in front of the screen will be a valuable improvement.

The other, smaller devices are, in their way, equally helpful. After all, the main reason for the existence of any process work is that it enables the producer to put a desired effect on the screen more easily and more economically than he could by any other method. Accessories that simplify or expedite the work of the process staff certainly aid in this, and make our work of greater value to the industry.

Father Hubbard Makes Record Filming

(Continued from Page 402)

tourists in Nome as the Oberammergau of the Bering Sea.

With the sale of their carvings and the extremely pretty and comfortable slippers made by the women, they are able to earn enough money to buy clothing, tea, flour, sugar, tobacco and other constantly growing needs. Much work can be found in Nome during the summer, and in winter they carve their ivory for trade with merchants of Nome or for sale on the boats anchored in the roadstead.

Hunt White Man's Luxuries

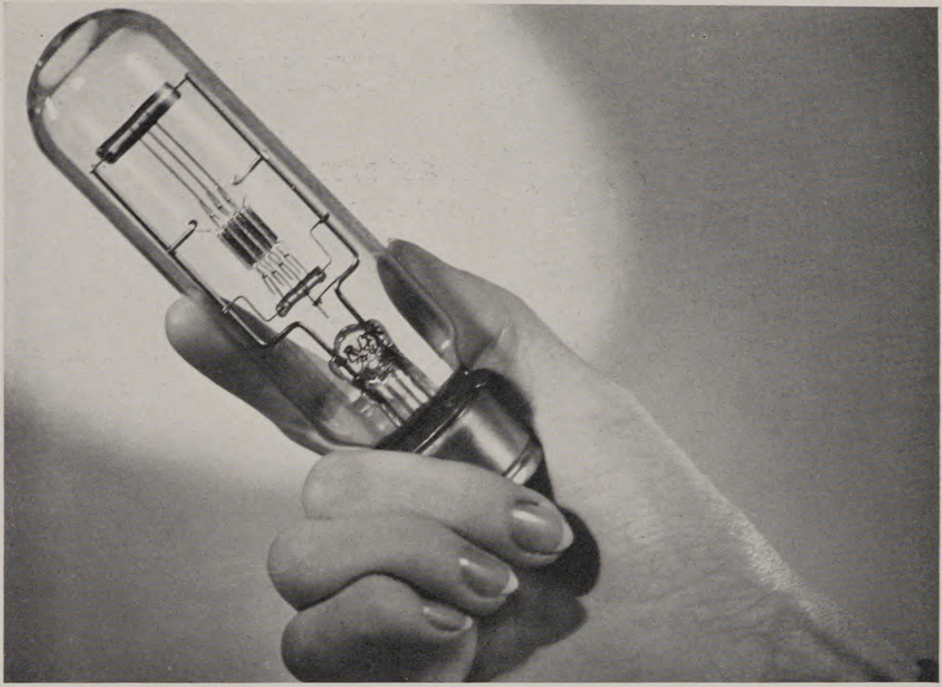
Whether for good or bad, the growing need for the white man's foods and comforts now necessitates the annual migration of the entire population to Nome. In several huge *oomiaks* first their belongings are stored and when only a few inches of freeboard remain thirty or forty people pile on top of the freight, and leaving their dogs to fare for themselves sail ninety odd miles to Nome.

The remarkable seaworthiness of these big oomiaks is attested by the fact that in all these decades the migrations have been made no boat has ever been wrecked and no lives have been lost. Now instead of paddles and sail, they use the latest Johnson outboard engine and make the journey in half the time.

Their return home in the fall is just as dramatic. Men, women and children, the entire population of King Island, their oomiaks and their supplies pile aboard a United States Coast Guard Cutter and they sail home in the best style afforded by Uncle Sam's navy.

Briefly, this is the story of King Island, where the eleventh Alaska expedition of Father Bernard R. Hubbard, S. J., went on location to impress upon thousands of feet of film the fascinating "Cliff Dwellers of the Far North."

100 WATTER THROWS 150--AND WHITER



DEVELOPMENT of a new 1000-watt projection lamp that delivers 50 percent more light on the screen than the present standard lamp of like wattage is announced by G-E's incandescent lamp department, Nela Park, Cleveland.

Light produced by the new source, according to the Nela engineers, is also appreciably whiter. This dual improvement in quantity and quality of illumination makes possible better screening of 16mm. movies for commercial, educational and home use. The improvement is attributed to a radical change in the projection lamp's internal construction and to burning the filament at higher temperatures.

Permitting the projection of larger pictures, the new lamp broadens the use of 16mm. projectors. It now enables this type of movie equipment to show before larger audiences than has hitherto been possible.

Producing a whiter light, the new source permits more faithful reproduction of colored pictures, Nela engineers said. They also pointed out that screen illumination is maintained at so high a percentage of initial value that there is no need for the inclusion of anti-blackening collector grids in the lamp's internal construction. The construction is such as to secure a high degree of concentration of tungsten deposit at the top of the bulb.

The filament is notably compact, being no larger than the filament of the present 750-watt Mazda projection lamp.

The new 1000-watt lamp is designed to burn base down.

Bury Newsreel to Come to Life After 5,000 Years

New York, Sept. 22—The first archaeological newsreel ever made—a message from today to unknown audiences of A.D. 6939—has just been completed by RKO-Pathé Pictures, Inc., under the direction of Allyn Butterfield, RKO-Pathé Editor.

The newsreel, along with other records and objects representative of the present era, will be buried deep in the earth on the site of the New York World's Fair 1939, in the 5000-year Westinghouse time capsule.

And when future historians dig the time capsule out, they will find not only the newsreel, but complete instructions for building a projection machine with which to view it. If they succeed in matching the machines of 1938 the newsreel will run about fifteen minutes, and the audience will view in succession these scenes from twentieth century human antics:

Franklin Delano Roosevelt, President of the United States, addressing a handful of Union and Confederate veterans and others at Gettysburg on the occasion of the seventy-fifth anniversary of the celebrated battle of that name, when Meade turned back Lee in the most critical hour of the war between the states. Howard Hughes, who flew around the world in three days, nineteen and a quarter hours, in July, 1938, as "Air Ambassador" for the New York World's Fair 1939—flying over New York's skyscrapers, landing at Floyd Bennett Field, New York City, on his return, and receiving the welcome of the city in the traditional tumultuous Broadway parade. Also there are many other timely and important happenings.

The art of the motion picture and of photography generally receives much attention. The entire section on the Motion Picture in the Encyclopaedia Britannica is reproduced in the micro-file; followed by the Radio City Music Hall program for the picture "You Can't Take It With You."

In the more than two-score magazines microfilmed there are other articles and photographs pertaining to the industry and its principles, and to photography.

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American Cameramen Lead . . . Pasternak

By Joseph Pasternak

Associate Producer, Universal Studio

Joseph Pasternak, associate producer under contract to Universal.

MOST of us here in Hollywood have come to take the cinematographer too much as a matter of course. We have become so accustomed to the fact that American cameramen are good that we seldom realize just how good they are.

The best cure for this attitude is the experience of making even one production abroad. Those of us who have done so invariably have returned filled with a new respect for the men who wield Hollywood's cameras.

I can speak from experience in this. Before coming to my present post at the New Universal I spent a number of years producing pictures in nearly all of Europe's several centers of production. Every day of that period drove home the fact that nowhere do cinematographic skill and artistry reach the peaks they do every day in Hollywood.

Yet all might very probably be done on the same day, in quick succession. Moreover, if the next day you find need for a retake of any of these scenes, your European cameraman will give you still a different quality in the retake!

Cinematographers in this country may find this hard to believe, but it is a fact. Moreover, I can state from my own experience that when one pleads with the average European cameraman for greater consistency the answer is all too often a blank stare. He may be willing and eager to give it to you, but the fact remains that in nine cases out of ten he does not know how!

Here in Hollywood, on the other hand, we take it as a matter of course that any cinematographer's scenes will blend smoothly with each other, regardless of whether they are made minutes or weeks apart. We know, too, that our cameramen can and do rise to the greatest

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artistic heights—and sustain this inspired camerawork throughout a whole production.

The Europeans know it, too. Their admiration for the technique of American films is boundless. Their technicians study even ordinary American productions as intently as art students study the paintings of the old masters.

Home Talent Okeh

And when an American cinematographer works in or even visits a foreign studio his very appearance creates a sensation. I still remember how excited everyone was when Peverell Marley, A.S.C., some years ago made a production in Budapest! It is also a fact that one of the best cameramen in Europe today is an American, Ted Pahle.

From my own experience on both sides of the Atlantic I can say that while there is much to be gained from bringing really exceptional European players and directors to America—as for instance Danielle Darrieux and Henry Koster—I am opposed to the idea of importing foreign cinematographic talent. Even if today's acute unemployment problems did not exist, there would be nothing to be gained from bringing even the best of foreign cameramen to Hollywood.

The real "aces" have come here and become cinematographically Americanized long ago; as for the rest, I would not hesitate to put any American operative cameraman in charge of my picture in preference, with the assurance the American operative would do not merely as good a job but one far better!

Working with America's "ace" cinematographers is a revelation to a producer or director who has formerly worked abroad. Here the cameraman is more than merely a dependable artist-technician: he is in countless other ways an important part of the active producing partnership.

He plays fully as important a part in telling the story as does the director or producer. The American cinematographer does far more than simply providing beautiful and consistent camerawork: he makes lens and lighting play a dominant, if subtle, part in building emotional effects.

Let Cameramen Alone

Whenever an executive discusses cameramen he seems expected to comment on the question of advancing cinematographers to directorships. The excellent records made by various men who at different times have directed certainly proves that cameramen can become good directors; but much as I like to see deserving individuals receive advancement I cannot say I am in favor of the idea.

After all, the task of transferring a production from set to celluloid is one which deserves the full energies of two specialized artists: the director of action and the director of photography. To obtain the best results, each must supplement the other—one thinking in terms of dramatic action and dialog; the other in terms of dramatic camera angles and lighting.

Experience several times has proved that where either of these artists has attempted to divide his attention between his own field and the other the resulting product has suffered, as has the individual's own work.

Cameraman Advancing

As a producer, I would naturally far rather see a smooth working team like Director Henry Koster and Cinematographer Joseph Valentine, A.S.C., collaborating on a production than to see Valentine directing—no matter how brilliantly—and know that in adding one to the ranks of good directors we had lost a really great cinematographic artist.

I believe, on the other hand, that our American cameramen have so far advanced both their work and themselves that they are definitely becoming partners with the director and producer in shaping the production. Most of us are so close to this gradual change in the

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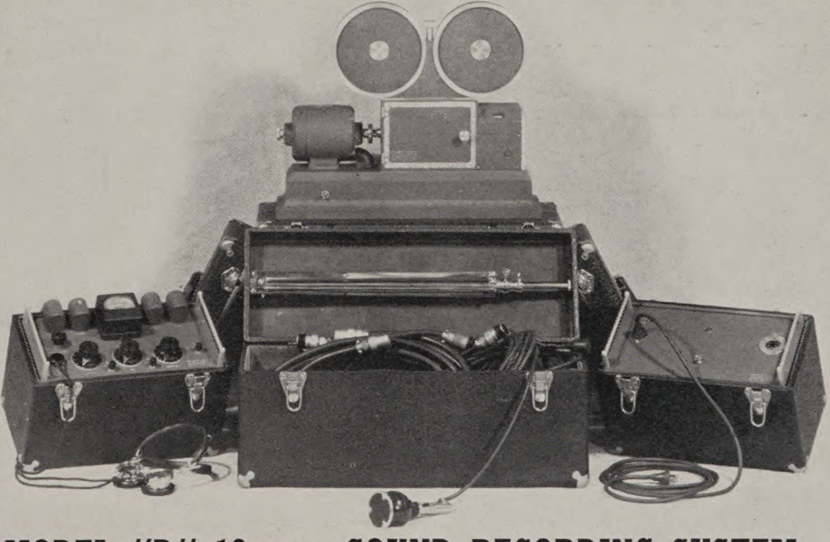
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status of the cinematographer that we are hardly aware of it.

But consider: Not so many years ago the man responsible for photographing a picture was simply the cameraman—a rather subordinate technician whose presence was necessary largely because pictures had to be photographed.

Today he is the director of photography in fact as well as name—a genuine partner in planning and making the production. His advice is courted on many questions other than the strictly technical problems of production. He has become the ranking specialist in translating mood and drama into visual imagery.

An important factor in this development is one which has generally gone unnoticed. It is the fact that the public is becoming actively photography-conscious. The millions of still cameras and home movie cameras in use throughout this country and the mushroom growth of many new popular photographic magazines should give us an indication of this fact.

But to most of us it comes as a surprise when, listening to audience comments after a preview, we hear the audiences commenting to each other not, as they used to, about the charm of this player or the personality of that, but about the lighting of this close-up, the filtering of that exterior, or the smoothness of that dolly-shot.

After I made this discovery, I received an additional surprise when I learned about the sort of "fan-mail" a cinematographer of Joe Valentine's caliber receives.

In volume it compares more than favorably with that of most directors, and in studious intelligence it probably exceeds that of anyone in the studio. Instead of the conventional "I-saw-your-last-picture-and-think-it-was-fine" sort of thing, the cameraman's fan-mail asks intelligently, "How can I duplicate this effect you had in your picture with my 16mm. camera?"

Amateurs Keen Observers

And Joe tells me the amateur films received each year in the American Cinematographer's International Amateur Movie Contest show that the amateur really studies professional methods, and puts them to use in his own picture making.

I believe the next step in this growth of the cinematographer's stature is likely to come with color. Sooner or later—probably sooner than we realize today—color is going to be the thing for all important productions.

At that time I look to see top flight camera artists become specialists in color.

In a word, I believe cinematographers are paralleling the evolution of directors. There was a time when a director might make a "special" this month, and a "B" picture the next. Today, we know it would be as unwise to put an Archie Mayo, a Lubitsch, a Taurog, a Ludwig, or a DeMille to making a programme film as it would be to use a pile-driver for cracking nuts.

The day is coming when we will realize the same thing is true about our "ace" cinematographers. That realization will of course benefit the cameraman and I am confident it will be of equal benefit to the industry as a whole.

Issue Visual Report

Proceedings of the Eighth Session of the National Conference on Visual Education and Film Exhibition contains 130 pages, 6½x9 inches. Reports are in detail of the proceedings of this year's confernce together with transcripts of addresses.

The country's leading visual authorities attended and their addresses and discussions are faithfully reported. "Commercials" as well as instructive films are discussed and applications to classroom use reported.

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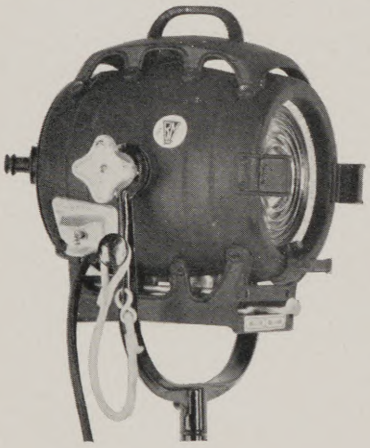

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AMERICAN ANNUAL 1939 IS BOOK WORTH HAVING

EDITED by Frank R. Fraprie, the American Annual of Photography 1939 was issued September 30 by the American Photographic Publishing Company of Boston and Chapman and Hall Ltd., of London. The book contains 330 text and 56 advertising pages. The price is $1.50 paper and $2.25 cloth —and well is worth the money.

Right off the bat the book makes good its claim as a photographic publication by devoting ninety-six continuous pages to its section of salon prints. They are from the world around and from the cameras of recognized artists.

There is a wide range of material in the twenty-five or more articles. One of the most important and interesting as well to this reviewer is the fourteen-page illustrated story by Fritiof Fryxell around the career of the ninety-five-year-old William H. Jackson, photographer, artist, explorer.

The second paragraph of this absorbing tale: "It seems incredible that one lifetime could embrace so much of the history of photography. William H. Jackson has followed the science through swiftly changing scenes from its crude beginnings in the daguerreotype and wet plate processes to present day achievements in color work and the cinema. Throughout he has been a pioneer in the unending quest for improved photographic techniques and methods and in bringing his camera in advance of the throng into new regions."

Jackson served in the Civil War, and in 1866, following a broken engagement, he started west. He kept going until he landed in Los Angeles. After three months here he started east with three other adventurers driving 150 wild mustangs. This sequence ended in Julesburg, Colo., then terminus of the railroad.

He opened a photograph "gallery" in Omaha in 1868. From that year until 1880 he "traveled far and wide over the plains and plateaus of the West," exploring the Rocky Mountains, securing thousands of superb wet plate negatives varying in size from stereoscopic dimensions to 20 by 24 inches, making photographic history. He did much work for the Government. But space forbids further comment here on this remarkable story.

Laurence Dutton's "The Understanding and Use of Filters" is another outstanding story and runs fourteen pages. Eight pages are devoted to Paul L. Anderson's "Rationale of Pictorial Composition," with many diagrams to illustrate.

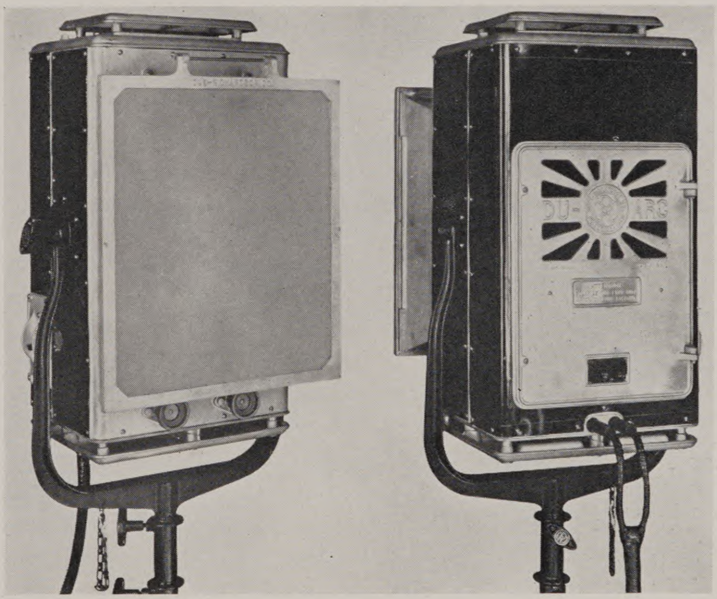
The foregoing are just a few of the highlights. The book is not one to read and let go out of your possession. It is one for your reading table's permanent and not rotating listing, provided

(Continued on Page 416)

LIGHTING NEWS *Extra*

ON THE SET EVERY DAY

RECORDS FALL TO DUARC



NEW CHAMPION SILENT

Duarc, the industry's new arc endurance champion (above), remained silent today despite searching quiz by star reporters Mike R. O'Phone and R. E. Corder. Pair at last retired baffled, admitting they were unable to evoke a sound from the brilliant new champion.

DUARCS TO NEW YORK

With Hollywood studios clamoring for services of champion Duarcs, New York's filmsters have joined the demanding parade. As a result, a squad of Duracs this week entrained for Manhattan, where they will reinforce Charles Ross' battallion of H. I. Arc spots, Side Arcs and Scoops on duty brightening Broadway's Technicolor productions.

DUARC IS PRODUCT OF MOLE-RICHARDSON

Duarc, the sensational new twin-arc endurance champion is the newest product of MOLE-RICHARDSON COMPANY, 941 North Sycamore Avenue, Hollywood, California. Products of the firm, which has affiliates or dealers in London, New York, Paris, Bombay and Cairo, are in use wherever motion pictures are made throughout the world.

DUARC UP FOR "WIZARD"

Several MGM technicians are said to favor Duarc for role of "Wizard of Oz." One recently pointed out that though Duarc made no claim to increased brightness, he obtained better effects with it at 8 feet than with previous twins at 4 feet. "If that's not wizardry," he says, "I'd like to know what is?"

OLD MARKS TOTTER BEFORE NEW CHAMP

Continuing its record-breaking sweep, Duarc, M-R's new twin-arc endurance champion, this week proved its mettle on a major-studio Technicolor set. Working on actual production, Duarc operated a full working day on a single trim of carbons, with no attention or adjustment other than switching off between takes. In more than thirty years that movies have been filmed under arcs, no twin had approached this record.

Previous twin-arc endurance mark, established several years ago by previous M-R twin, had stood at 40 minutes operation between retrims. Early last month Duarc shattered this record with a sensational run of 2 hours, 10 minutes 22 4/5 seconds under official timing.

Insiders point to this record as key to speeding up color-film lensing. Ranking high among delays of color production, they say, is time spent retrimming batteries of floor and overhead twin-arcs. Latter especially are often inaccessible. Duarc, able to operate without trimming for half a day or a day speeds production noticeably.

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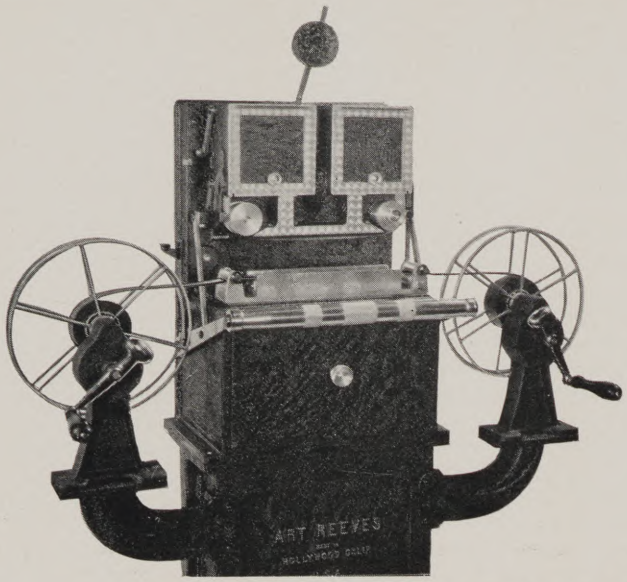
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M-R Introduces Duarc

(Continued from Page 407)

For the same reason, and also because of the better ventilation of the new unit, this diffuser can be mounted closer to the lamp. Instead of being roughly hung over the front of the unit the diffuser fits in a rigid aluminum frame which slides window wise over the front of the lamp. It can be quickly slid up for retrimming the carbons and as easily be replaced or supplemented with additional diffusing media.

The designers of the Duarc have made no claim for increased illumination as compared to the previous Side Arc. It is significant, however, that cinematographers who have used the new lamps on actual production report that with the Duarc at eight feet from the subject they obtain more usable illumination than they did with the previous Side Arc types at four feet.

The new unit is slightly larger than the older Side Arcs, but forms a compact and considerably neater-appearing unit. It may be burned in almost any position, and actually supplants two previous types of equipment—the Side Arc for floor use, and the Scoop for overhead use.

For the latter, special overhead hangers, fitted with the customary safety lock chain guards, are available. For floor use a new pedestal has been designed to give the Duarc an unusual range of height adjustments, ranging from a minimum of 4 feet 6 inches from the floor up to a maximum of 8 feet.

Dunning Has New Color Process

(Continued from Page 406)

stitute a drain upon the producers using Dunningcolor, but will pay its own way.

Producers on Their Own

"Dunningcolor will thus be photographed with the producers' own equipment, by their own camera crews, and processed in their own laboratories. The process will be available on a licensing basis at a low royalty charge.

"The precise cost to the producer will therefore be largely dependent upon his own laboratory operating costs, which naturally vary from studio to studio. In general, however, the cost of Dunningcolor will run between 30 and 40 per cent below the cost of any existing three-color process.

"According to apparently authentic published statements, the present cost of three-color negative and developing is approximately 28½ cents a screen foot. The same items in Dunningcolor will cost 19 cents a screen foot.

"Another important factor is the fact that with the Dunningcolor printing methods, full color rush prints can be turned out overnight, and at the same cost as release prints, as against the present average cost of 12 cents a foot for color rushes."

The new process is the fruit of 21 years of color research by Carroll Dunning, aided by his son Dodge Dunning and recently by L. E. Clark, who some time ago resigned as chief recording engineer for RCA to head the Dunning firm's chemical research staff.

American Annual Good Book to Have

(Continued from Page 415)

you are permitted to maintain such a provocative collection.

There are nineteen pages devoted to recording the details of American amateur photographic societies and thirty-two to "Who's Who in Pictorial Photography." Ten pages are given over to "American Annual Formulary."

American motion picture films accounted for more than half of the 165 feature length films reviewed during the first half of the current year by the Film Censorship Bureau of Finland, according to a report from the American Consulate at Helsinki.

Of the 165 feature length films 92 were American. Germany accounted for 22 films and France was third with 18 films, while the remaining 33 films included 8 Finnish and 25 other foreign "features," the report states.

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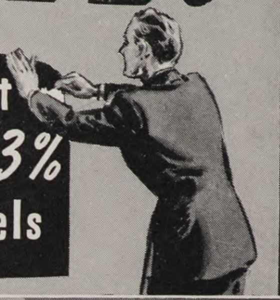

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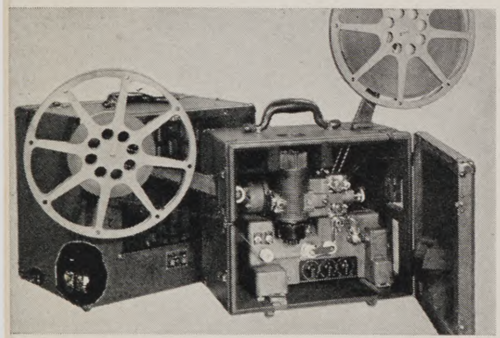

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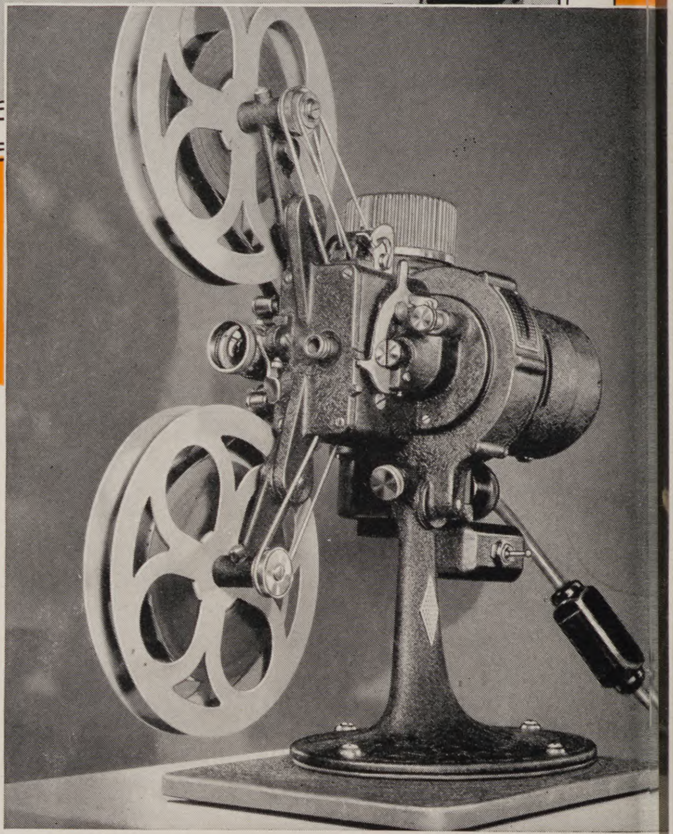
Use the Filmosound 138, now priced as low as $346, both for your personal movies and for the many fascinating new talking pictures available in the Filmosound Library. (Ask for valuable free catalog.) Filmosound 138 will operate for a full hour without rethreading (at silent speed), and permits reverse and still projection. Amplifier output has recently been doubled! Write for catalog of all Filmosound models, including the Filmoarc for largest audiences.



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The Filmo S, pictured, provides perfect home movie presentations, now costs only $125. It is equipped with a 500-watt lamp and a 2-inch F 2.1 lens, accommodates 400 feet of 16 mm. film, provides reverse and still projection controls, and many other features. 750-watt models also reduced in price. See price-list below.

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Fred W. Jackman, Treasurer American Society of Cinematographers

Dan Clark, A.S.C., Director of Photography Twentieth Century-Fox

Tony Gaudio, A.S.C., Director of Photography Warner Brothers Studio, Academy Award Winner 1937

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It Won't Be Long Now

By GEORGE BLAISDELL

THE picture that adorns this page came to the desk of the editor just as the baby was going through the throes of being tucked in and kissed good night. This page was one of the less than half dozen still out of the clutches of the make-ups. So far as this writer knows it is the first photograph of last year's International Amateur Competition's grand prize winner that has been printed here, the photograph of James A. Sherlock of Sydney.

As this issue is the last to appear before the closing of the 1939 competition it seems especially fitting to hold up the works long enough to include the photograph in this month's issue. And that's that.

▼

CHARLES LANG Junior, A.S.C., was awarded the nod by the Hollywood Poll for the best photography of the month. The subject was Paramount's "Spawn of the North." It is a picture unique in many respects. The locale of the story is Alaska, and in that country many thousand feet of film were exposed perhaps a hundred thousand.

H. R. Booth, president Australian Amateur Cine Society; James A. Sherlock, vice president and publicity officer; Fred W. Pratt, vice president and editor Movie News; photo by Member Reg. Perier.

The production is a technical triumph in several directions. The disintegration of the glaciers, the tumbling into the ocean of thousands of tons of ice, is so dangerous to anything in the way of craft, especially smaller or ordinary sized craft, the sequence necessarily had to be done in the studio by specially trained men.

How that was done the picture shows. It is terrifying in its realism. But the illusion is complete. It is one of the finest demonstrations of the importance to motion pictures of the devices that have been created through the skill and craftsmanship of cameramen, devices really a thing apart from their ordinary work of Photographing pictures.

For the iceberg sequence Gordon Jennings, A.S.C., is given credit. Farciot Edouardt, A.S.C., is another whose work contributed to the sum. Then there were a fourth and fifth, those who headed the camera crew that went to Alaska—Loyal Griggs, A.S.C., and Frank Good, A.S.C. And their "stuff" speaks for itself.

It was all-around team work, the factor that makes studios great in their product. It need not be construed the great quality of co-operating aid given to the production made it any easier for the director of photography. It made it just that much tougher. And Charlie Lang met the issue, met it by matching in less spectacular surroundings the thrilling work of his mates.

▼

THE contract of C. King Charney with C. King Charney, Inc., distributors of Agfa Motion Picture Films, the expiration date of which was October 15, 1938, has been amicably terminated.

The name of C. King Charney Incorporated will be changed to Agfa Raw Film Corporation and the company will continue its business at its present quarters in Hollywood at 6424 Santa Monica Boulevard.

▼

THE Livingston (Montana) Enterprise of September 8 devotes nearly a half column to the article in the September issue of this magazine by Ormal I. Sprungman outlining his experiences in recording rodeos on motion picture film. It just happened the illustrations adorning the article in question were exposed at a Livingston roundup, as pictures in the story revealed. Quite apparently Sprungman and Livingston each rate high in the other's estimation.

Also it just happened that on another page of the Enterprise was a story describing how Charles W. Herbert, A.S.C., with a still camera had won for himself the first two pages of the then current Look magazine. In recent weeks the A.S.C. man has been taking pictures in and around the Yellowstone Park area, of dude ranchers and animals among other attractions.

Since his return from the Orient, where he secured many stirring motion pictures later released through March of Time, Charlie Herbert has been making Livingston his home. He is one of that militant group which to the four corners of the world has carried high the torch of A.S.C., to the credit of brother members at home.

▼

ONE of the signs of the changing tendencies among amateur motion picture filmers was noted at the annual picnic of the Los Angeles 8mm. Club this last month. Several members, possibly a half dozen, carried three cords about their necks. On two of these, of course, were respectively a motion picture camera and a light meter.

The third was a still camera. In other cases still cameras were hanging from a loop and the movie camera was mounted on a tripod near one of the central tables for use when needed.

Those who thus are triply equipped are prepared to take care of almost any eventuality that may pop up.

▼

IN a letter written during the past month to George A. Blair, veteran Eastman executive, the letter closed, somewhat querulously possibly, to the effect that "Now is the summer of my discontent . . . if the mercury does not show close to 90 at least these days we wonder what can the matter be . . ."

In the course of an answer, after extending his best wishes to his old friend John Boyle, A.S.C., Mr. Blair by inference referred to the paragraph just quoted.

"Between the heat and the doings of the Legionnaires," his letter read, "I imagine Los Angeles must be a real hot spot these days. Here in the Valley of the Genesee the days are filled with soft sunshine, the corn is in the shock, the pumpkins are ripe, the cider mills are turning out golden fluid and nature is gradually painting the landscape with indescribable Autumn tints.

"If any of these attractions appeal to you I should be delighted to have you here to prove their reality . . . and it would be a pleasure to do so."

The letter was dictated, and it is to be presumed without particular consideration as to form or style or rhythm—with just the amount of care bestowed upon it as any business man gives to his correspondence.

Perhaps readers may join this writer in wondering what might have been

(Continued on Page 426)

Sunset, Waikiki Beach.

HAWAII CAMERA PARADISE OF THE PACIFIC

By John W. Boyle, A.S.C.

Photographs by Ira B. Hoke

HAWAII is the photographic paradise of the Pacific! How do I know? Well, I have just spent eight weeks over there . . . shooting color, 35mm. standard bi-pack, 35mm. Leica Kodachrome and 16mm. Kodachrome. On the 20th of May, Dodge Dunning, Ira Hoke and yours truly set sail on the good ship Matsonia Honolulu-bound, to produce a color picture of the islands for the Dunning Process Company, to be exhibited at the exposition in San Francisco in 1939.

There are plenty of photographic opportunities on shipboard, but we won't go into that—it's been covered before—but get your camera ready bright and early the morning of arrival . . . assuming you have not stayed up too late at the captain's dinner the night before.

The first impressions of the islands are always worth recording, especially if you are shooting color. Remember you are coming from the east. The light is a three-quarter front, ideal for either black and white or color.

Kodak Service

The arrival in Honolulu is almost as colorful as will later be the departure. Somehow you'll find that some one has heard about your coming and you'll discover yourself presented with a colorful and fragrant lei.

Another mysterious thing has happened. Long before the boat actually has been docked you will have been presented with a cartographic map containing exposure scales for all the beauty spots of the islands, the times at which these should be photographed for the best lighting and the relative exposure to be given, good for professionals as well as amateurs.

This super-service is due to the enterprise of that energetic individual Fritz Herman, managing director of Eastman Kodak Stores of Hawaii, Ltd. Fritz has made a careful study of im-

Pyramid Point, Mauna Lahilahi, Island of Oahu.

Kodak camera train just prior to departure from Honolulu.

portant shots needed by all amateurs, with the consequence real results may be secured with a minimum of effort.

The Waikiki branch is in charge of our old friend Bill Sullivan, who with his Hollywood training has aided Mr. Herman in injecting showmanship into the selling picture.

Each weėk Eastman Kodak stages a hula dance with some of the best talent available on the island—dancers and singers from the Royal Hawaiian and Moana hotels. The location is ideal, for it contains cocoanut palms, breaking surf and the typical South Sea Island atmosphere. There is always a breeze, which gives added life or movement to photographs or films.

The "shooting" is so organized that 16mm., 8mm. and minicam fans all are given equal chance to secure shots. In fact, Eastman has a portable store on

Amateurs snapping shots of Kodak hula dancers.

Kodak camera train, near Kaena Point.

the location so you may replenish your supply if necessary.

My advice is to shoot plenty of footage, for you'll get much pleasure out of running these films for years to come.

Get Phonograph Records

When your day's shooting is over get some phonograph records of the music that was played — it's all available in Honolulu—and you virtually can have a sound picture when you get home. Also don't fail to get plenty of close-ups and you will have fun cutting them in to synchronize with the long shots.

Another thrill: Ask Mr. Sullivan to arrange for your being "among those present" on the next outrigger film trip. If the surf is running high enough the beach boys will organize a party and take its members out strictly for "shooting surf riders."

The big outrigger is provided with an outboard motor, so the skipper has abso-

Kodak hula dancers perform for the amateurs.

lute control. He keeps just far enough ahead of the crest of the wave to give you a swell shot. He has done this so often he will even tell you what diaphragm to use and what lens gives the best effect.

Invariably the skipper maneuvers his boat so that you hold old Diamond Head in the background all the time. Thus there is no mistaking the scene was made in Honolulu.

Better wear a bathing suit, for there is quite a bit of spray coming in. Either wrap a bath towel around your camera or do as we did. You see, it was Sunday and the stores were closed.

Lucky Amateur

We went to the lost and found department of the hotel and secured a nice red cellophane raincoat. This is hardly necessary for an amateur, the lucky amateur some might add, but it must be remembered we had to manage a big Mitchell 35 mm. camera, with double magazines. After each shot better inspect your lens for spray and clean off any you may find.

The thrill of the ride is worth the price even if you don't get a picture. Fifty or a hundred feet of this subject make a sequence that is always thrilling. If you come away without it you always will regret it.

The rest of the island offers pictures at every turn. There are no billboards or handbill throwers in the Hawaiian Islands. There is a cleanliness which I wish existed on the mainland . . . and the like of which I have seen only in Scandinavia.

Camera Train

The liquid sunshine (rain to you) is frequent enough to keep everything fresh and brilliant with just the right amount of life to the color surfaces.

Once each month Mr. Herman organizes what is known as the "Camera Train," running on a Sunday. The particular occasion which this writer attended was advertised five days prior to the appointed date in a sixty-inch ad in the Honolulu Star-Bulletin.

It was set forth a 110-mile special trip to out-of-the-way scenic beauty spots of Oahu would be made for $1.10 round trip. "All amatuer camera fans and especially visitors to the islands, are invited to come," the ad stated. "Trains will stop at all 'photogenic' points. You will have an opportunity to shoot the Black Lava Coast of Kaena Point . . . acres of sugar cane, banana sisal and rice will keep shutters clicking. Come and join the fun."

The Honolulu Advertiser of the following morning says 500 amateur and professional photographers were aboard the train. Where originally it had been deemed five cars would be sufficient to accommodate those who cared to go there were fifteen cars on the line when the train pulled out.

For prints that are left at the Kodak stores by the first of the following month the one decided the best will win $10. Three other prizes of $5 each also will be given. Only professionals and photographic store employes are barred.

Three Other Islands

Besides Oahu there are three other islands that offer real material. These are Kauai, Hawaii and Mauai.

On Kauai the Waimea Canyon must be photographed in color. It is the nearest thing to the Grand Canyon I have seen. Although it might be raining when you get to the summit it is worth waiting an hour or so for a break in the light.

Just a few patches of bright sunlight, here and there, with the everprevailing cloud shadows, will give you a stereoscopic effect. All of our shots were made between 12 and 1 midday and turned out excellently.

At the crater of Kilauea, on the island of Hawaii, there is always steam escaping or some activity. If you visit the extinct crater of Haleakala on the island of Mauai get up there for sunrise, but take plenty of warm clothes. It is 10,000 feet at the summit. It was so cold when we were up there in June we had to build a fire and heat the camera in order to induce the motor to turn over the gears.

Bill Sullivan, manager of Kodak at Waikiki, and his hula dance troupe.

Eastman Issues Long Focus f6.3 Lens of EKtar Series

UNPARALLELED correction for lateral as well as longitudinal color is claimed for a new long-focus lens of the famed EKtar series, just announced from Rochester by Eastman.

The new lens, an Eastman anastigmat EKtar f.6.3 of 14-inch focal length, is designed for users of commercial and view cameras who require a lens "unequaled for the making of color separation negatives in accurate register." It is held to solve the problem of photographers whose present "color-corrected" lenses are unable to produce color-separations that will superimpose properly.

"Special attention," the announcement states, "has been given to the correction of lateral color which is particularly important in the making of color separation negatives. Numbered test plates are made with each lens and filed for reference."

The 14-inch Eastman Anastigmat EKtar f.6.3 lens is mounted in a new type light weight all aluminum barrel with "click" stops for positive diaphragm operation. Its wide coverage, the announcement states, allows full use of the adjustable front and back of 8 by 10 cameras. For protection against damage a sturdy velvet lined box and two lens caps, front and back, are supplied with each lens. Mounted in all-aluminum barrel, with lens caps and protective box, the Eastman anastigmat EKtar f.6.3 lens, 14-inch, is priced at $175.

It Won't Be Long Now

(Continued from Page 422)

brought forth if George Blair had slipped into the family armchair with pad and pencil and in complete relaxation in writing had dreamed of the glories of the Valley of the Genesee.

But George Blair first of all is a salesman—whether it be merchandise or his homeland. The quality of the former is known of all men. The beauty of the latter is known to many . . . and this writer has personally witnessed the rural charms so engagingly painted with so deft a brush. It ain't right for a man to be obliged to pass up an invitation like that.

One cine dream comes true

After two years' planning and toil

DOWN in Bournemouth on the English Channel, a hundred miles southwest of London, where Stratford on Avon is a parallel distance to the northwest, J. P. J. Chapman, A.R.P.S., F.R.S.A., has created a real theater in his home. From an examination of the planning and execution indicated in the excellent illustrations it is a logical step to the conclusion that here is the cinematographer's dream come true.

Some time since word trickled back to the West Coast across the six thousand odd miles separating Bournemouth and Hollywood that the master of The Huon, in Branksome Hill Road, was doing something extremely remote from a theatrical way but certainly very much in a theater way.

He also was doing something in a substantial and a constructive way—and doing a lot of it with his own hands. That after all is a good yardstick by which to register the measure of a man's enthusiasm, the depth to which the bug fotografico has sunk his fangs, and over and above these the degree the builder has attained in learning, or knowledge if you will, regarding showing a picture after you have created one—and to place the factors that aid in showing it.

Two Years in Making

The first question likely to be asked by the cine enthusiast will be the expense involved in the building of the theater. It is the opinion of the owner that had the improvement been made in orthodox style, by means of architects and contractors, the cost would have been about $4000. Done in the manner adopted by Mr. Chapman less than a quarter of that sum went far to its accomplishment.

The below ground room which was converted to the theater is approximately 15 by 23 feet in dimensions. The builder devoted two years to making the changes in the conversion of this little used room into a pocket theater with its three rows of five seats each, every one of which rates as loge to the initiated.

The ceiling is triple Masonite packed with sawdust. The proscenium also is Masonite, while the screen is a nonwarping Masonite laminated girder construction sprayed silver. The walls are of rough surface composed of plaster and sawdust and are highly sound absorbent.

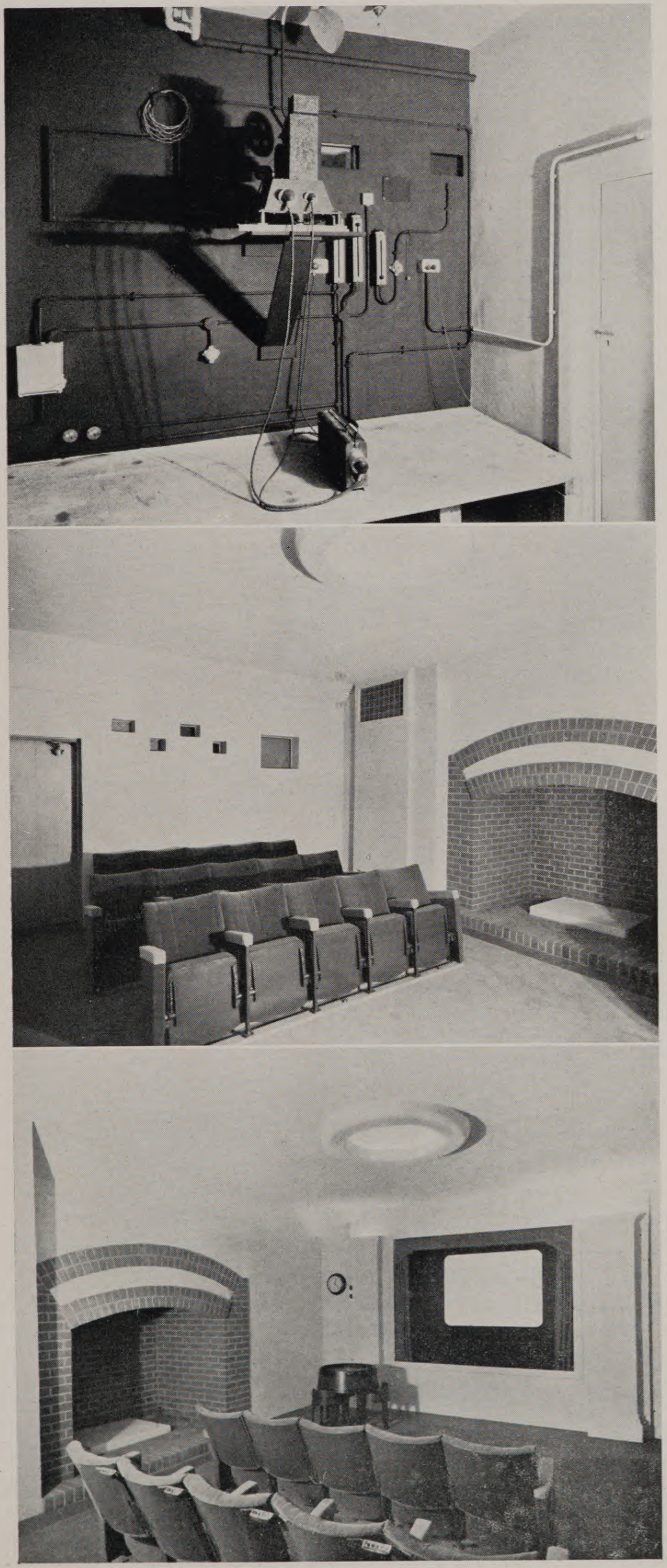
The large light bowl in the center was cast in a sandbox, is 4 feet 6 inches across and 1 foot 6 inches deep. It weighs 150 pounds and is held by a metal spider to the joists.

Equable Temperature

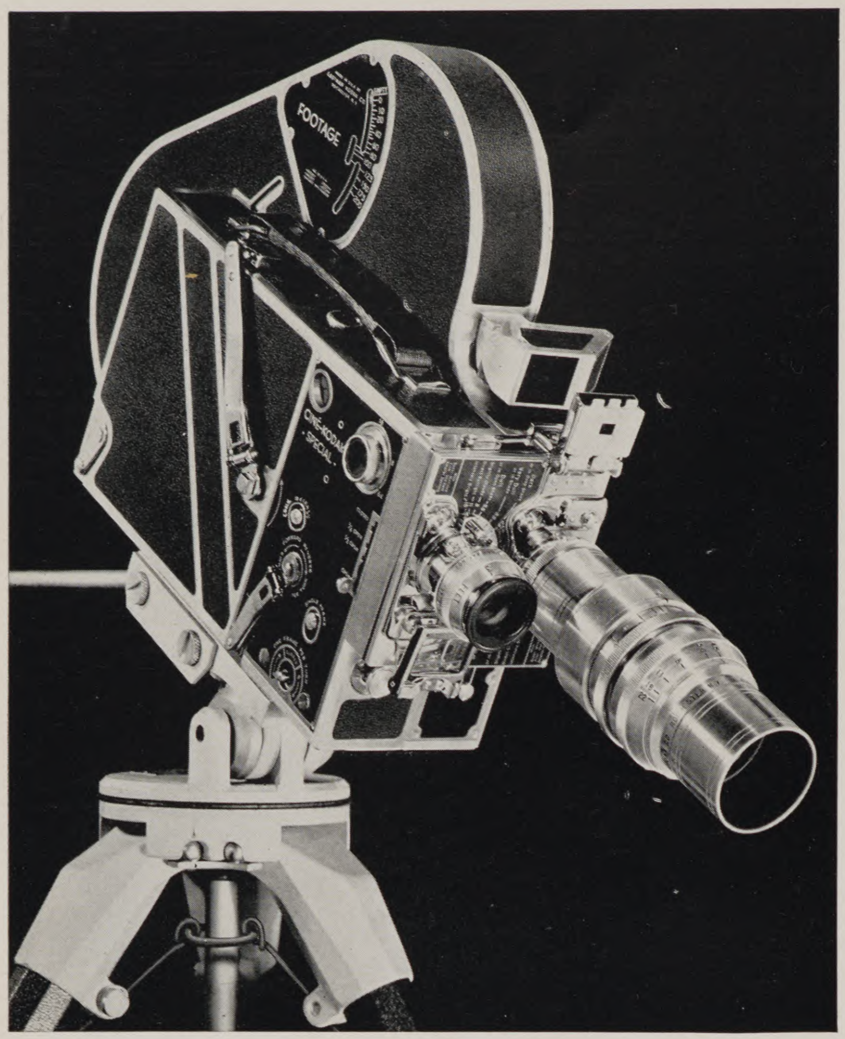
The ventilation consists of a shaft to the open air, through which air is sucked by way of a heavy mat of steel wool soaked in non-odorous oil. This is then driven over thermostatically controlled heaters, which will maintain the room at 60 degrees F. The air temperature does not rise much above this unless the outside air is above 70 degrees F. as the vacuum on the filter creates a fall. Sufficient space is provided for this between the twin fans.

The air exit in the room is protected by a fine mesh screen preventing the ingress of insects, such as spiders. Provision is made for safety, if the outside air is shut off, so that a hot pocket cannot be produced by non-circulation if the heaters be switched on.

Continued on Page 440.



Top, projection room, with some equipment yet to come. Center, projection ports, tip-up seats and fireplace—and inasmuch as Bournemouth tops Los Angeles, for instance, some eleven or twelve hundred miles in latitude, that fireplace looks just that more interesting. Lower, screen and some of the seats, with a view of the 150-pound light bowl.



A CAMERA IS NO BETTER THAN THE MOVIES IT MAKES

THE designers of Ciné-Kodak Special have built into one compact machine every refinement necessary to the making of 16 mm. movies—"professional" in scope, strictly "amateur" in ease of attainment. Fades, dissolves, double and multiple exposures, spring motor drive or hand cranking, animation, mask shots, interchangeable lenses for a double-lens turret, ground-glass focusing, interchangeable 100- or 200-foot film chambers, automatic footage indicators, individual film foot meter, single frame counter—these are some of its many unusual features.

Yet, despite the unparalleled versatility of the "Special," so many and so varied are the tasks to which it is put that its users—advanced amateurs, physicists, engineers, doctors, biologists, visual educators, athletic instructors—have frequently requested special apparatus to enable them to go even further in their work. Most of these devices obviously could not be properly added to the basic model. So they have been designed and offered as accessories: a lens extension tube outfit for almost microscopic magnification; three different electric motors for automatic or remote control exposures; an electric release control outfit, battery operated, for growth studies and other time-lapse filming—to mention but a few in this limited space. And other devices will be made when, and if, necessary.

If this sounds like the camera you need to lift your film efforts to the plane where they belong, ask your dealer about Ciné-Kodak Special, or write Rochester for the full story—"THE STORY OF THE WORLD'S FINEST 16 MM. MOVIE CAMERA."

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

FILMING PIGSKIN BATTLES NO CINCH

By George Sherlock

Official Cinematographer Athletic Department, University Southern California

As each football season rolls around football-minded friends slap my back and say to me: "What a lucky man you are, George! You get to see all the University of Southern California's football games—and get paid for it!"

True enough, it is my job to film all the Trojan team's games in 16mm. slow-motion Kodachrome movies for the Athletic department of the University of Southern California. But my friends are wrong on one point. I NEVER REALLY SEE THE GAMES! Often, I hardly even know which team won, nor by what score, until I get home afterward and pick up my newspaper!

During the actual game I'm much too busy to think of anything but cinematography. There is no time to think of the play as anything other than a problem in camerawork. Filming a fast-moving, deceptive sport like this you've got to keep your mind on the camera.

Let your mind wander for a moment and—zip—you've missed a play! Probably an important one. Do that only a few times, and you'll find somebody else shooting the game, while you cool your heels beside the family radio.

A couple of years ago I had an assistant. He was a capable, studio-trained man who could probably remain cool as a cucumber while Hedy Lamarr went through the most ardent of scenes. But he was a football fan, and I quickly learned I couldn't use him. Right in the middle of what I suppose was an exciting moment, he was so overcome with football fervor that he dropped his camera and started to cheer.

Missed Shot

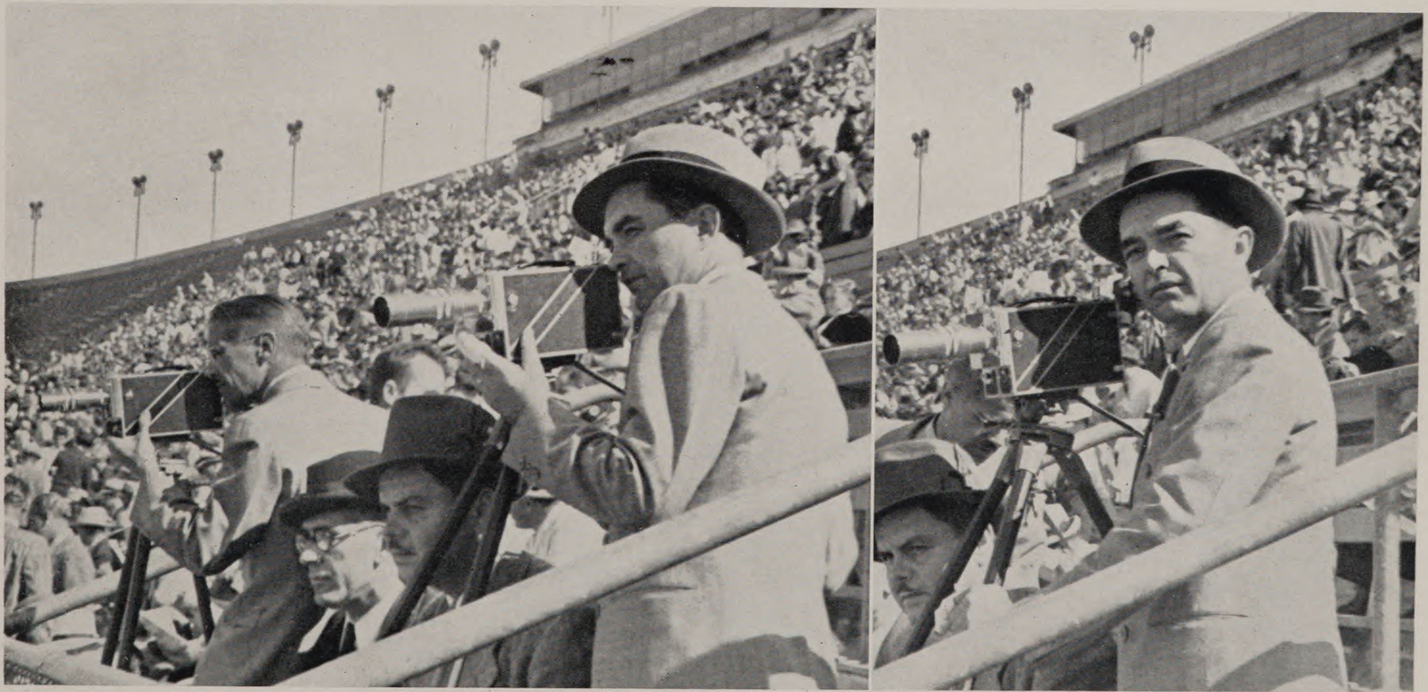
Worse yet, he began waving his arms like a cheer-leader—and nearly knocked me and my camera over! I had a great time explaining why I missed that key shot in which U.S.C.'s opponent got away for a long gain.

Why does Coach Jones have me make movies of all his team's games? Well, it is not, as some people think, so that he can study the play of the opposing team. By the time a game has been filmed it's too late to do much about that particular opponent—and next year the opposing coach may come up with a flock of new players, and new plays too.

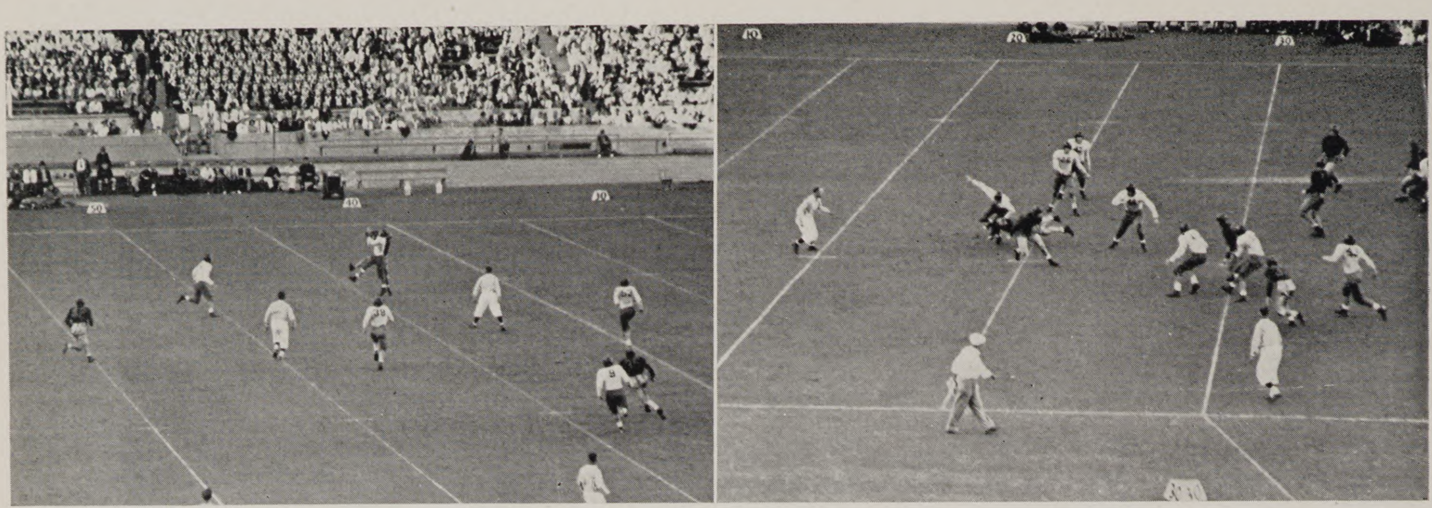
But slow-motion movies are one of the best possible methods of studying your own team. The camera reveals innumerable little faults in both individual and team play which could never otherwise be detected.

So as soon as the film is processed and cut the Trojan players have an intensive session of screen study. Watching themselves in slow motion, the players can see what each did that was right and what was wrong.

So can the coaches! On the field if a player fails to take out his man as planned, or doesn't get down to receive a pass, only the negative fact that he didn't perform his assignment is evi-



Left, The author and his crew at work filming the 1938 Southern California-Alabama game. Right, George Sherlock and his Cine Special. (All photographs by William Stull, A.S.C.)



Coaches want pictures that show the whole play, rather than close-ups of individual players. These shots of the game between Southern California (dark jerseys) and Alabama were made using 135mm. lens in a Contax, with exposures of 1/500 second at f:11 on Agfa Supreme negative.

dent. On the screen it is usually possible to discover why he didn't—and to correct the fault.

Cool Head Imperative

So it's easy to see why a cameraman must keep his brains "on ice" to fulfill such an assignment successfully. We film every play from start to finish, and I can assure you it often takes quick thinking to forecast where the play is going to go.

As a rule I know no more about Southern California's plays than the opposing players do (sometimes less!) and while the play is meant to fool the opponents it isn't considered good form for the team's own cameraman to let himself be fooled, too!

Completely covering such an assignment calls for a lot of equipment and plenty of first-class, level-headed help. For the past several years I've used two Eastman Cine-Kodak Specials—one to shoot—the other as a stand-by camera in case of emergencies.

The Special is by long odds the ideal camera for this work. The interchangeable magazines speed up reloading tremendously. While I am shooting with one magazine my assistant can be reloading another. When I get down to the end of my roll I simply slip off the magazine and replace it with a fresh one.

Then the assistant, with a special rewinding box we've had made, runs off the trailing leader of the exposed roll, reloads, and runs through the leader of a new roll.

Using half-a-dozen magazines you know that even with two or three cameras going, there always will be a freshly loaded magazine ready to use when you need it.

Use 48 Frame Speed

Incidentally, while the newsreel boys often use telephotos to give them extreme close-ups of some individual star player, I never do. My business is to show the team as a whole. The lenses mentioned give me a good, full-screen shot of the entire scrimmage (both teams) with the general exception of a defensive back playing the safety position.

As I've said, we shoot all our games in slow motion. But we don't need to use the expensive 64-frame-a-second speed. Instead, 48-frame speed is quite adequate. It uses less film, and if the coaches want to slow anything down still further, they can always slow the projector enough to get an equivalent slowing to the 64-frame effect, yet without getting too unpleasant a flicker.

In the latter part of the game we slow the camera down to 32-frame speed as more and more of the stadium is shadowed. In the past, we would use regular pan for the early parts of the game, and Super Sensitive for the later quarters. Further on this fall, as the evenings fall earlier and the late afternoon light becomes poorer, we will probably have to shoot color as long as the light is adequate, and then finish in monochrome.

Even with the slower camera speeds we burn up plenty of film. Using but one camera, each game requires from 1200 to 1400 feet of film.

Have Special Section

The best viewpoint for filming football is one as high as possible, looking diagonally down on the play. From this angle you can show practically the whole team, while if you do it from ground level you can show only the action nearest your lens, which will, of course, hide much that occurs farther away.

Since at our games the press-box, high on the rim of the stadium, is usually crowded with reporters, radio announcers, newspaper and newsreel photographers and "visiting firemen," we rarely work from there.

Our cameras, assistants and accessories require plenty of space. Instead we have a special section right over one of the entrance tunnels, which still gives a high viewpoint, and also allows much more room.

The choice of lenses depends of course on where in the field the play is occurring. For plays in midfield, close to my side of the gridiron, I use two-inch lenses. For plays on the opposite side of the field I switch to three-inch objectives. For action at points between, say, the forty and twenty-five yard lines, I use a four-inch lens.

For action from the twenty-five yard line to the goalposts I use a six-inch lens. This enables me to keep the images of the players pretty consistently the same size no matter where the play occurs.

Diagonal Angle

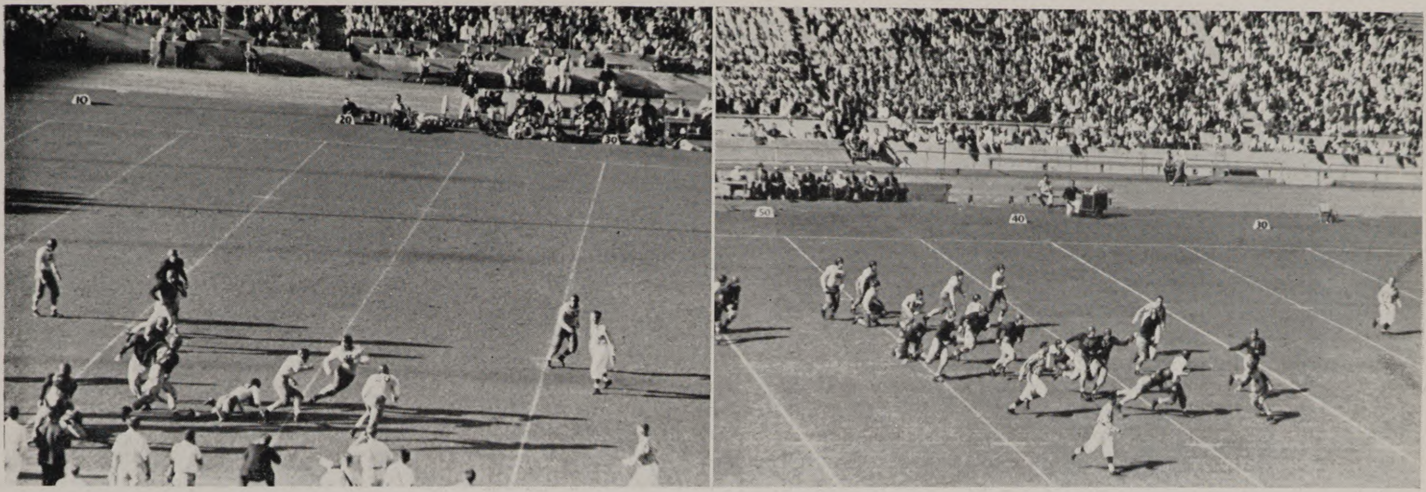
If one worked single-handed on an assignment like this I suppose the telelenses might give considerable problems in exposure. But working, as one must if he does it seriously, with plenty of assistants, it is easy enough to send someone down on the field every now and again to take a meter-reading.

The real problem is one created by shooting at the steep downward angle required by the necessarily high viewpoint. It's first cousin to our friend finder parallax, but it works differently. If we were shooting from the ground level we would be square with our subject. If we could shoot straight down from above, the same would be true.

But we're shooting at a diagonal angle. This makes the field taken in by the lens change from a rectangle to a trapezoid. In plain English the field is foreshortened, and wider at the top than at the bottom.

The finder doesn't see things that way. Unless you are prepared for it, you will find that action you've centered on the cross-lines of your finder will surprisingly be moved down toward the bottom of your picture on the screen. I had to have special finders made for all my cameras to compensate accurately for this.

On some plays — especially running plays, kicks and passes—I center things



Late in the game, as the field becomes shadowed, faster films or slower camera speeds — sometimes both — are necessary. These pictures, made in the closing minutes of the final quarter, used Agfa Supreme, exposed 1/200 second at f:5.6.

differently than would be the case if the film was made for pleasure. On such a play I keep the ball carrier well to the back edge of the frame, instead of in the center.

From the coach's viewpoint, what the ball carrier does is no more important than how his interference forms to protect him, or how his fellow-players block off the opposing tacklers while he gets away a kick or a pass.

Panning Ball

Once kick or pass is made, I follow the ball through the air, but let it get a bit ahead of my panning, so that when it reaches its mark I can show not alone the receiver, but also what the other players do to protect or intercept him.

On the home games, I have one of my assistants acting constantly as a runner, rushing exposed film to the laboratory in Hollywood, where it is processed as fast as possible.

Both teams want these films as soon as possible, so they can study the play-by-play pictures in the first sessions they and their players have after the game. That calls for quick processing and quicker cutting!

All of this, I hope, will indicate that this business of filming football for coaches should be approached in a cold-minded, fully professional spirit. That, I believe, is why in spite of the numbers of enthusiastic amateur filmers in most colleges, such filming is seldom intrusted to undergraduates, or in fact to amateurs among the alumni or even to outside amateurs.

Practically all of the colleges in the Pacific Coast Conference and, I believe, in most other major conferences, make such official films of their games. In some parts of the country, however, there are undoubtedly colleges which do not as yet make such films, but could very well use them.

Do Your Job Well

These offer an opportunity to the really advanced 16mm. filmer—provided he is willing to approach the problem as it should be approached. Here are some hints: first, don't offer to do it for nothing; nobody appreciates something secured that way, and in a case like this they are likely to suspect cut rates conceal sloppy workmanship.

Second, have proper equipment and plenty of really good assistants. Third — and most important — if you tackle such a job, do it well. Remember to keep your mind on your photography—forget you are a football fan.

If you must get excited over football filming, do it after the game, when you are running your rushes!

G-E ANNOUNCES CHANGE IN ITS EXPOSURE METER

A new calculator, easy to operate and covering a wide range of film speeds, is being supplied with the General Electric photographic exposure meter. Simple manipulation of the new calculator, by means of a knurled dial, makes possible the reading of film speeds from 2 to 160. Larger numerals facilitate quick readings.

Also incorporated in the new model is the single-arc scale, previously optional and now standardized in accord with the popular demand for simple calibration. Involving no changes in the meter itself, the new scale provides complete camera settings with the aid of the calculator.

Any individual user of the previous standard General Electric exposure meter who desires to have his unit modified in line with the new design can return his meter to the General Electric Company, 40 Federal Street, West Lynn, Mass. If he desires the single-arc scale in addition to the new calculator, he should specifically request it. A charge of $2.50, c.o.d., will be made for the change.

All features other than the calculator and the scale remain the same in the new instrument. With its easily removable cover the unit gives accurate readings in bright, medium and dim light. Its use is the same for movies or stills, in color or in black and white.

New Eastman Darkroom Outfit

A new Kodak darkroom outfit No. 3, just announced from Rochester by Eastman, includes everything the amateur needs to begin developing and printing his own pictures. It consists of 1 Brownie darkroom lamp, 3 4 by 6 inch Eastko trays, 1 eight-ounce Eastko graduate, 1 3¼ by 5½ Eastman printing frame with glass, 1 eight-inch glass stirring rod, a one-pound package of Kodak acid fixing powder, 1 Kodak tray thermometer, 2 Kodak junior film clips, 6 blotters 9½ by 12, set of three rubber finger tips, one package of 5 by 7 Eastman mask charts, one copy of "How to Make Good Pictures," two dozen sheets of Velox Paper 3¼ by 5½ inches, one instruction booklet and five tubes of Universal Developer. The price of the outfit is $4.25.

Exploit Films in Windows

The use of American motion picture cuts and photo enlargements in store and business window displays is becoming more and more widespread throughout Sweden, especially in Stockholm and other larger cities, according to a report to the Department of Commerce.

Although these cuts and enlargements are intended primarily to advertise the films in question, they are gradually becoming an integral part in the window displays in that country as they have a strong drawing power for both customers and window shoppers, the report stated.

PREPARING SMALL CAR FOR CHASES

By Jack V. Wood, S.A.C.

THE amateur cinephotographer sooner or later finds he needs very much a method satisfactorily to photograph "chase" scenes. Also the same amateur would like very much an easy method of quickly moving his camera, tripod and all, from one place to another, and yet at all times keeping it set up ready to shoot. Still another urgent need is that of producing smooth exterior trucking shots.

It was found possible to solve all three of these problems with one mobile unit, a bantam size convertible model automobile.

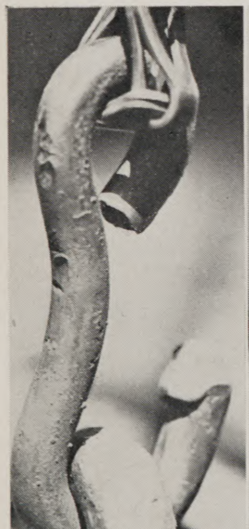


Figure 2—A bolt eye in the car floor, directly below the camera, allows for solid anchorage of the tripod to the car itself.

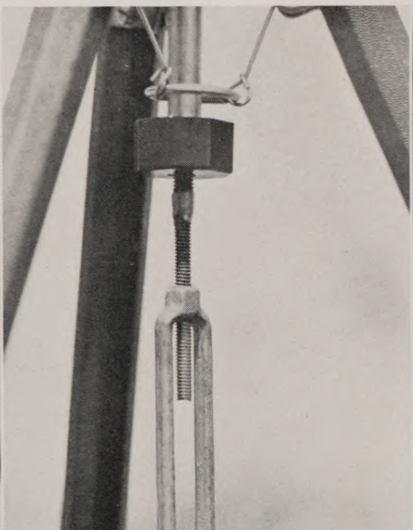


Figure 3—The chain attached to the car floor, as shown in Figure 2, is attached to the tripod through a cinching bolt which in turn is bolted into the panoram adjustment of the standard Cine-Kodak tripod head.

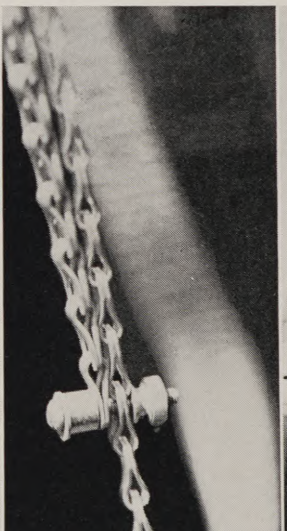


Figure 4—Further chain length adjustment is obtained by looping the chain back and securing with an easily removable bolt.

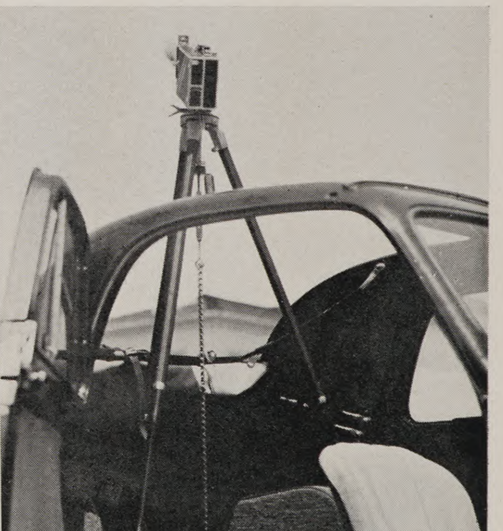


Figure 5—The tripod is set up directly behind the front seats in what is normally the luggage compartment.

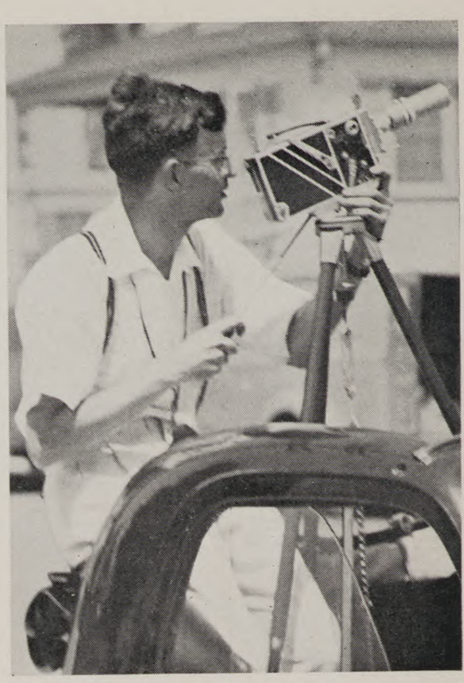


Figure 1—Camera and tripod stick out well above the top of the car, and the cameraman (the writer) rests comfortably seated on the folded top.

The particular car used is a Fiat, which has the advantage of a rigid body and yet allows for the entire top of the car to be opened up. As shown in Figure 1, the camera and its tripod stick out through the top of the car, allowing 360 degrees of panoram without the car itself ever getting into the scene.

Due to the extremely low build and short wheel base, the tilt allows for at least 180 degrees operation, and excepting for directly forward shots the camera can tilt from close-up ground to the sky, all without including the camera car in the scene.

The tripod is set up in what is normally the luggage space, directly behind the two front seats. Most important to successful operation is the ability to anchor the tripod and camera solidly to the car itself.

Anchoring Tripod

This is accomplished by inserting a bolt eye through the metal floor of the car, directly below the camera position. Then a chain is hooked to the eye, as shown in Figure 2, and the other end of the chain is attached to a cinching mechanism which in turn is bolted into the panoram adjustment of the standard Cine-Kodak tripod, as illustrated in Figure 3.

This anchoring arrangement is fundamentally the same as used by the professional cameramen, and it will hold the camera and tripod absolutely rigid under nearly all conditions. However, care must be taken that the tripod legs are securely set, and that the leg points bite into the rubber mat of the car floor.

Chase shots are the biggest problem of the camera car, for due to the short wheel base and the fact the motor is pulling the car vibration may be excessive for some types of shots.

When the chase is exaggerated by eight-frame camera operation, vibration will be very noticeable, but then, in such exaggerated action, camera vibration may only heighten the illusion and not be undesirable.

Where normal motion is wanted it should be faked as much as possible. This is done by running the camera at 32 frames and speeding the action to compensate for it. The advanced camera speed will smooth the camera car motion and eliminate undesirable vibration.

Another method, suitable in short shots, is to allow the car to coast with the motor turned off. In instances where the camera allows for shutter adjustment, it is best to keep the exposure time as fast as possible by closing down the size of the shutter opening.

Mobile Camera

Trucking shots are a specialty of this camera car. Because the camera car is so small and so light, the setup is easily pushed around in all types of trucking shots. No attempt is made to run the car on its own power.

While the cameraman operates within the car, an assistant steers as the cameraman directs, or as rehearsals have indicated, and two more assistants do the necessary pushing and pulling.

The car truck operates easily on sidewalks, over lawns, in fact anywhere the professional camera truck would attempt to operate without special tracks in an exterior shot. The rubber tires, plus an efficient spring and snubber action, give very satisfactory taking results.

The third great advantage of the camera car is rapid mobility in taking a series of stationary camera shots. The camera may be set up within the car so that it is no higher than it normally would be for an ordinary shooting set up.

Convenient Platform

The car is driven to the first position, the motor turned off, the shot made, and on again to the next camera position. By this method it is possible to work three or four times more quickly without sacrificing anything in careful camera operation and subsequent photograpic quality.

Especially convenient is this method for taking exteriors when one wishes to photograph buildings, sidewalk scenes, or traffic scenes from a busy street. Not only is the work done much faster and much easier, but also at less danger, for the cameraman is not out in the street dodging traffic while he works.

Naturally the camera tripod anchorage principle may be applied to a normal sized car, but the distinct advantage of the bantam size car is its compactness, lowness to the ground and the lightness that allows easy pushing and pulling around.

Simple Two-Purpose Accessory

Where a normal car could not be easily operated over sidewalks and lawns the bantam takes all this in its stride, without damage to the landscape. In fact, it is doubtful if the little car is much bigger or heavier than the professional camera truck.

The amateur cinephotographer, in shooting interiors, often finds it advantageous to have a front light in the immediate vicinity of the camera, able to follow the camera's movements. Perhaps the most convenient method of accomplishing this is by means of a U-shaped metal strip that fastens the light right on to the camera tripod, as illustrated in Figure 1. The light will then turn automatically with any camera movement.

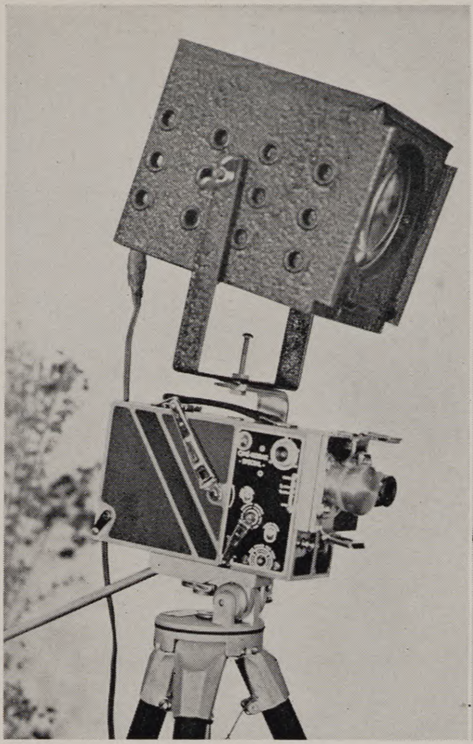


Figure 1

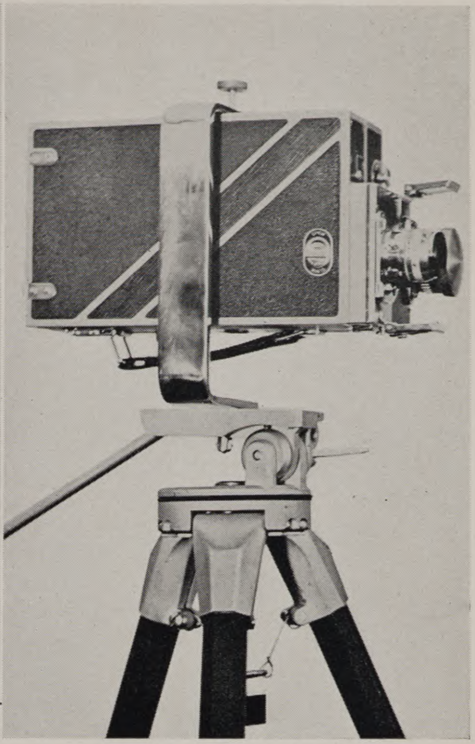


Figure 2

The U-bar has a hole drilled in each U-end. One hole is threaded the same size as the tripod screw and the other hole is left unthreaded. When the bar is used as a camera light support the unthreaded end is slipped over the tripod screw and the threaded end is used to bolt on the light.

Another Use for U-bar

But this U-bar has another use, and that is to invert the camera in making reverse motion shots. Although on the particular camera illustrated it is possible to hand crank the film backward for reverse motion shots, the use of an inverted camera, later turning the film end for end after processing, is much more convenient. Especially is this so where the camera must follow some action during the reverse motion scene.

When using the U-bar for reverse motion shots, as illustrated in Figure 2, the threaded end of the bar is attached to the tripod bolt and the camera is then attached upside down to the other end of the U-bar with the same spare bolt that also serves to fasten the camera light to the metal bar.

Since the bar will vary in size with the camera used, no specifications are given, but the construction is rather obvious from the illustrations showing the accessory in use both as a camera light holder and as a reverse motion camera attachment.

Universal Issuing New 8mm. Model

THERE'S a new 8mm. camera in the works. Universal Camera Corporation's district offices now are taking orders for the model that will be known as the World's Fairs Cine 8 Camera. The prices will range from $12.50 for the f5.6 lens to $47.25 for the f1.9. Among the features listed for the new model are:

A new type brilliant vision optical view finder built into the body of the camera.

A quick closing hinged cover which cuts the loading time almost in half.

A self-locking cover catch insuring automatic locking of the cover.

A new type shutter release mechanism closing the shutter every time the motor is stopped.

A high-powered, quiet running motor giving a long run of film at a uniform rate of speed. The new governor incorporated in this motor represents an advanced design.

▼

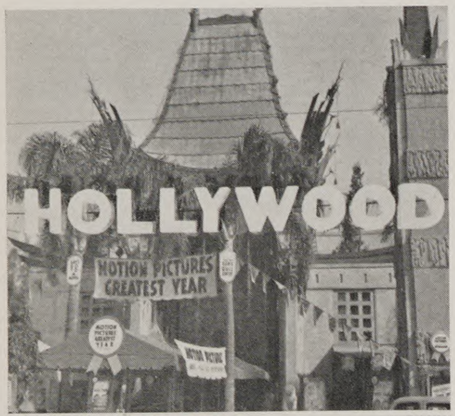
South African Censors Report

The report of the Board of Censors of the Union of South Africa for the year ended December 31, 1937, shows that 1520 motion picture films were censored during the year, 1415 approved without excision, 73 approved after certain excisions, and that 32 were rejected.

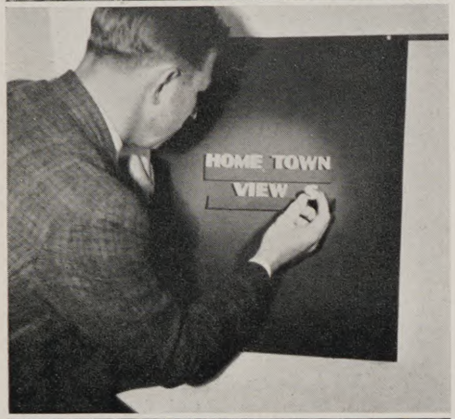
Censorship is so strict in the Union of South Africa that exhibitors hesitate to offer films for review that may be rejected. It is interesting to note that six appeals were lodged against the decision of the Board, and that four of these were upheld.

When superimposing titles

By Robert W. Teorey



1—Top: This cut illustrates a scenic fully described by the wording employed. Scenes to follow should tie in with this opener.



2—This illustration is descriptive of a quick title set-up on black cardboard. The letters in this case were spot-lighted to accentuate their appearance.

3—Introductory titles serve to acquaint the audience with the cast of a scenario story in the order of appearance on the screen.

4—Vignetting and back lighting add an extra touch to shots introducing members of a scenario story.

DOUBLE exposed titles on natural background offer a decidedly novel touch to amateur films, while the nature of their presentation adds much to the interest and continuity of the finished reel.

A measure of patience and the knowledge that the film is exposed twice—once for the background—and again for the title, plus a method for timing each scene for the second or title exposure, are the prime requisites for obtaining distinctive explanatory combinations.

During their preparation several factors should be given consideration in order to procure the best results. The selection of title backgrounds should be confined to scenes giving sufficient contrast to white title letters to define clearly the latter upon projection, and in this respect a tendency toward slight underexposure will help in gaining the desired effect.

Backgrounds must harmonize with the titles employed in addition to tieing in with the scenes to follow. Further, they should be free as possible from too contrasty compositions and harsh lines which might tend to absorb the title letters, rendering them difficult to read.

Views having excessive action in them should not be considered, as too much movement has a tendency to distract the attention of the audience from the titles, thereby nullifying the value of the information imparted by the lettering. That after all is the important feature of the two exposures.

Red Filter Solves Problem

Obviously when a large portion of the sky is included as part of the title background some means of darkening it in order that the white lettering will stand out clearly should be utilized.

A red filter will solve this problem very well, while moviemakers having yellow filters only will find that good results will be attained by their use coupled with a disregard for the full compensation of the aperture normally required by the addition.

Shooting background scenes for superimposed titles is exceedingly simplified if your camera is equipped with a backwind. However, most cine cameras are without this handy expedient and some other arrangement must be worked out to determine the beginning and ending of each scene.

A system quite commonly used is to load the camera as usual and when the end of the film has been safely secured to the take-up spool mark the emulsion side at a selected point with a lead pencil. Then close the camera and run off the leader to the mark required by the footage indicator. Time this procedure with the second hand of your watch and note the number of seconds elapsed for this action on a piece of paper.

Exposure for Title

The film leader now's on the take-up spool; your camera is in readiness for shooting the first title background. When the camera set-up has been effected for your first picture, time and note the scene length in the manner described for the leader. The same proceedings will apply for each additional shot for double exposure.

When sufficient scenes for title purposes have been taken in accordance with the above, the remainder of the roll may be used in the customary manner. When it has been completely exposed, reload it in your camera, and after securing the film end to the empty spool take it up until the pencil marked section is at the point selected in the original loading.

Replace the cover and run the camera the number of seconds previously noted for the leader. This will bring the film into position for the first title exposure.

The shot of the title must not exceed the time length noted for the background scene. If fades are used in the original views the time lapse of each should be noted on your log and due consideration of that fact be given when recording the title wording. In the event you fade in and out on the title, start and end the performance well within the scene length as determined in seconds.

Printed in White Ink

White letters placed on a dull background must be used to give you the effect shown in the illustration entitled "Hollywood." The background specified is very necessary in order to prohibit highlights and to prevent it from registering on the film. In this connection a small degree of underexposure will help subdue it, but will not prevent the letters from being clearly defined in the finished product.

Titles may be printed with white ink on album paper and photographed in your titler, although great care must be exercised in the printing, as irregularities are very apparent upon projection due to extreme magnification.

Printed in White Ink

White cast letters or those cut from cardboard give excellent results. For the background, black velvet or cloth devoid of sheen will serve very nicely, but the former will give the better result as it absorbs the light and is free from reflections.

Dull black printing cards size 20 by 26 inches may be purchased from most stationery stores and laid on the floor or used as illustrated. Secured to a card table inclined against the wall, two strips cut from one end were folded and thumbtacked through the inner fold in the location desired, serving to hold the letters in place for filming.

Upon conclusion of your superimposed title shooting, be absolutely sure you cap your camera lens before running the remainder of the exposed film on to the take-up spool. With 8mm. cameras using double film, it is necessary to run the film through twice in order to bring it back to the original container.

The system of timing outlined herein is not confined only to titles. Double or multiple exposures may be made of any type of scene or action requiring in such cases lens masks to block off the portion of the frame to be excluded during each filming.

Vignetting Subject

Where it is desired to introduce the cast of a scenario story, a very pleasing effect may be obtained by vignetting the subject with a short length of cardboard tubing placed over the lens barrel. Together with the unusual lighting effect obtained in Illustration 4 distinctive introductory shots will be obtained.

To achieve the inordinary backlighting in this cut, a photoflood in reflector was set up several feet in front of the subject at face level and to the right of a mirror hanging on the wall.

The young woman was placed near the mirror in a position to completely hide the reflection with her head. This resulted in normal front lighting and reflected back lighting. The right side of her face was lighted by a photoflood in reflector set-up at a low angle to prevent further reflections in the mirror.

Ripley Bugbee Passes

Ripley W. Bugbee, president of the Philadelphia Cinema Club, passed away September 14. He had been on his vacation trip, traveling through the West, and apparently contracted Rocky Mountain fever. He was rushed to the hospital, but the doctors were unable to stem the tide.

Mr. Bugbee was a charter member of the Philadelphia Cinema Club and instrumental in bringing it up to its present position among the amateur groups of the country. He was an untiring worker in the cause of amateur photography, and his own work brought him many prizes in the field.

His loss will be felt not only by the members of our own group, but by all those who have come in contact with him professionally or otherwise.

B. N. L.

New Brownie Darkroom Lamps

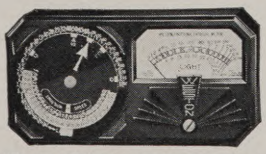
Two new Brownie darkroom lamps are announced from Rochester by Eastman. The line-up on these inexpensive darkroom aids is now: Series 2, red, for use in developing Verichrome Film; Series 3, green, new, for use in completing development of panchromatic film where complete darkness is not required; Series 0, yellow, new, for use in contact printing and enlarging.

Since each lamp, fully equipped with 7½-watt bulb, costs only 50 cents, the amateur can obtain a complete safelight set-up for $1.50 covering all the sensitive materials he commonly uses.

Of the 1,520 films censored by the Union of South Africa censors 347 were classified as drama, 395 as comedy, 486 as newsreels, topical, interest and musical, and 292 as trailers.

"Nantucket"...a WESTON exposed picture by Chas. Phelps Cushing

WESTON Junior . . . a quick brightness reading, a quick flick of the knurled knob, and you have all correct aperture-shutter combinations in full view. Price $15.50.


The Model 650 WESTON Universal. . . preferred by those requiring the flexibility of the exclusive WESTON exposure dial. Price $22.50.

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WESTON Exposure Meters

American Cinematographer

1938 International Amateur Competition

FOR 8MM AND 16MM SUBJECTS

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GRAND PRIZE $200

Photography	**$50**	**Home Movie**	**$50**
Color	**50**	**Scenic**	**50**
Scenario	**50**	**Documentary**	**50**

NO ENTRANCE FEE
ORIGINAL FILMS ONLY — NO DUPES
NO REDUCTION FROM 35MM

THE RULES

The contest is world wide and open only to genuine 8mm or 16mm amateurs or amateur clubs.

The contest ends at midnight October 31, 1938.

Pictures submitted will be judged for photography, entertainment and/or story value, direction, acting, cutting and composition.

The decision of the judges, among whom there will be prominent cameramen, will be final. Announcement of the awards will be made as soon after the close of the contest as possible and checks sent to the winners.

Pictures may be submitted either by individual amateur movie makers or they may be submitted by amateur movie clubs. Each entrant must have his entry or entries accompanied by a sworn statement, the blank for which will be forwarded to him to fill in.

Contestants may enter as many subjects as they desire. One entry blank will cover all subjects.

The American Cinematographer reserves the right not to declare a prize for any classification if in the opinion of the judges there is not a picture submitted sufficiently good to be classed as a prize-winner.

The American Cinematographer retains the right to make duplicates of such prize-winning pictures as it may indicate, for free distribution to clubs and amateur organizations throughout the world.

If you intend to enter the contest, please send coupon on this page for official entry blank.

NOTICE TO FOREIGN ENTRIES

Films from foreign countries will be admitted to the United States duty free if the pictures are made on American made stock. If this is the case, this fact must be included in the shipment, also the information must be given that it is for non-commercial use. If the film is not exposed on American made stock duty will have to be prepaid by the sender at the rate of $1 per hundred feet.

AMERICAN CINEMATOGRAPHER
1782 No. Orange Drive
Hollywood, California

Please send me one of your official entry blanks. I intend to enter a (16mm 8mm) picture in your 1938 contest. I understand my entry must be in the post or express office and so stamped not later than midnight, October 31, 1938.

Name ....

Street ....

Address ....

MAKE SHOW CATER TO NON-FILM VISITORS

WHETHER home movie audiences enjoy seeing our films as much as we enjoy showing them depends not only upon what we show but upon how we show it. Hastily dragging projector and screen from their closet, setting them up and rearranging chairs, lighting and so on is all right for informal screen jam-sessions with fellow filmers: but when we exhibit our films to non-filming friends we owe it to our audience to present the show with forethought and at least a touch of showmanship.

As a starting point everything ought to be set up and ready before the audience arrives. Projector and screen should be in their places, with the chairs arranged in between. The projector should be threaded and focused, to say nothing of being framed on the opening title rather than on leader.

There are a lot of little details about this matter of arrangement which ought to be considered carefully if we want to create a favorable impression with the average home audience.

For instance, projector and screen should be lined up accurately. If the projector is to one side of the screen, the image will appear short and squatty; if it is above or below the screen, the image will be distorted the other way, and seem tall and thin.

Projection in Rear

The screen itself should be as far in front of the spectators as space permits; otherwise the magnified grain of the film may become objectionably evident and definition apparently will be lessened. It is always a good idea to let the picture "bleed" off the screen on all four edges. This minimizes any unsteadiness in the picture.

The projector, too, should whenever possible be well behind the audience. Modern projectors are quieter, and emit less "leaked light" than did the early ones, but even today are noisy enough and glary enough to be disturbing if placed in the middle of the crowd.

And while we're speaking of noise, avoid using the average bridge table for a projector stand! The thin tops of such tables act like sounding boards to amplify the drumming vibration of the machine.

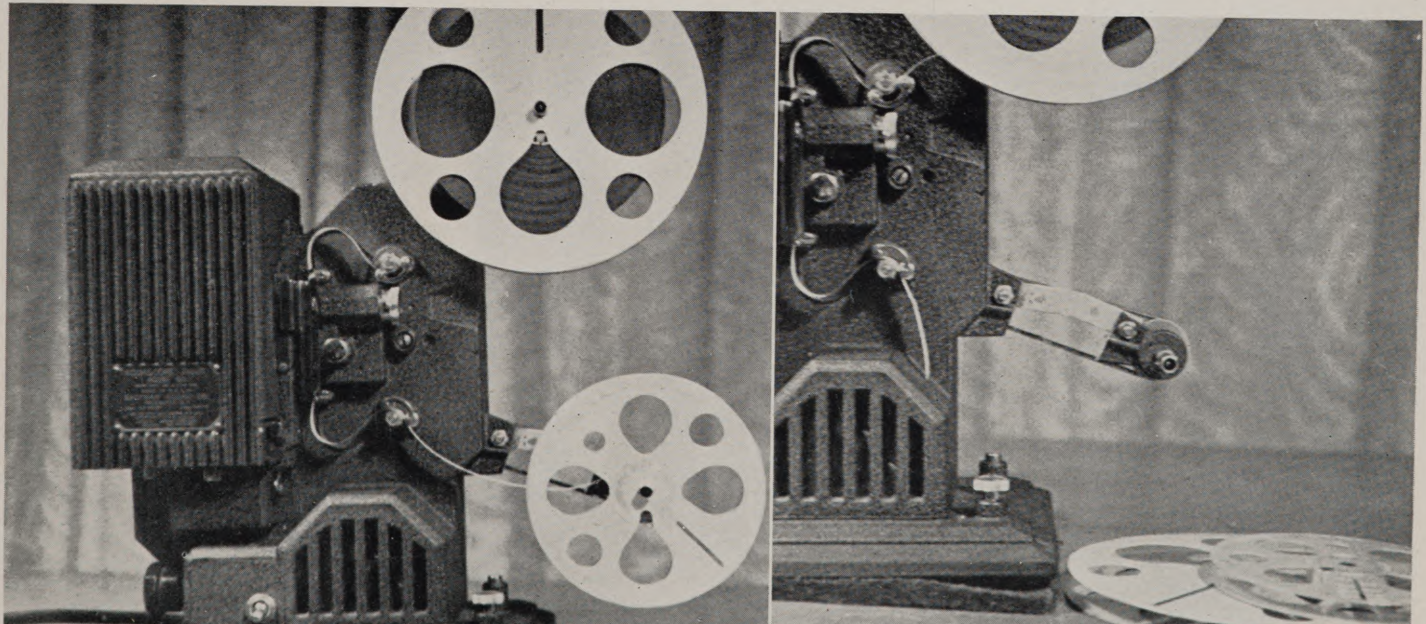
On any table, a felt pad or better yet one of the sponge-rubber "kneeling pads" made to protect scrubladies' knees is a grand thing for absorbing projector noise and vibration.

The projectionist should by all means be able to control the "house lights"—the lights of the room in which he is projecting. Many modern projectors provide for this by having an outlet either in the projector cable or in the machine itself, wired so that when the house lights (such as a reading lamp) are plugged into this they are automatically turned off when the projector is turned on.

Plug in House Light

But if your projector lacks this refinement there are several easy ways of getting around it. If you're a fairly handy home electrician you can easily add the outlet and a double-throw switch to either your projector or the cable that feeds it. Personally, though, I prefer to have two separate switches, placed conveniently close together, so that you need not "kill" the house lights when you rewind.

One of the simplest ways of doing this is to put a two-way outlet at the end of an extension cable. Into one of the outlets plug the projector. Into the



Belt-driven 8mm. projectors can easily be rebuilt to take 400 foot reels. This is the way Randolph Clardy of the Los Angeles 8mm. Club converted his Eastman projector. The closer view shows how the reel arms were extended. The reels were rebuilt from 16mm. reel sides and 8mm. hubs.

At the Los Angeles 8mm. Club's picnic Bob Teorey leads the threescore and more revelers in song. Aiding him and just below him Claude Cadarette employs a gallon glass jar as a sounding box. Beside him Ernie Zeiders with a piano accordion supplies the instrumental music. In the chair is Al Leitch doing his best, while at the camera Secretary Bion Vogel, he with the tiny trick Spanish hat, pans the group.

In the center Bill Stull competes in the balloon bursting contest. At the moment the picture was snapped it was a question which might be the first to go—he or the balloon. Claude Cadarette encourages Bill to hang on.

At the right President Cornell slides around to the right of Bill and inserts a pin in the balloon, which lets go in Bill's face. Cornell may be seen smilingly walking out of the picture. The lad at the left very plainly hugely enjoys the situation.

other plug a shorter extension with a switch between its male and female ends.

Tape this to the projector cable, arranging things so that the switch is conveniently close to the main projector switch. Then plug the house light line into this second cable. In use you can then have projector and house light switches close together so they can be operated in succession, or even together.

And speaking of house lights, many home impresarios like the idea of having a little soft light during the show. If you favor the idea, try placing one or two dark blue or purple Christmas tree lights behind the screen. This puts a little glow of faint light behind the screen and outlines the picture more sharply, lessening eye strain. Be sure, of course, that the tiny globes aren't so close to the screen that they shine through it!

Using colored light in front of the screen can add interest to many types of black-and-white films. A simple color wheel can be fitted to the projection lens to give many of the effects of tinted film. Some of these devices, commercially made a few years ago, can be picked up cheaply in many stores. If you want to make your own it is simple enough.

If you want utmost simplicity a couple of discs of cardboard will do. Cut about five circles in each disc and a central hole for the axle upon which it is to revolve. Into four of the larger circular holes cement colored gelatin—red, light amber, blue and green are the most useful colors.

Converting 8mm. Projector

For downright simplicity, one cardboard disc is enough; but for strength and safety use two with the colored gelatins between them, and so better protected. An ordinary spool can serve as a hub.

The disc can be simply glued to the end of the spool: but a stronger construction is by cutting the spool in two, gluing the cardboard to one half, and then, with nails and glue, replacing the other half. A wooden dowel can serve as an axle.

If you want something neater looking take an old 8mm. reel and remove the sides from the hub. Then use the

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DAYLIGHT	12	3	$3.00
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two metal discs for your color wheel, fastening them tight together, of course.

In any event the color wheel should fit rather tightly on its axle, so that the projector's vibration won't turn it. One opening should be left clear for occasions when you won't want the color effects.

The exact method of mounting the wheel on the projector will be governed by the design of the projector itself. Generally, the supporting shaft can be clamped, or even taped to the lens mount.

Another use of colored light is in floodlighting the screen itself with low-powered illumination of any desired color. This imitates the effect of toned film. The whites and highlights of the projected picture remain clear, while the shadows and halftones take on the color. Combining these effects with those produced by the color wheel, which colors the highlights and lighter tones, will produce innumerable interesting tone-and-tint effects.

If your picture—or your program, for that matter—runs more than a single reel in length, by all means mount your films on reels as large as your projector will accommodate. It reduces the number of interruptions while the reels are changed and makes for a smoother show.

Most of the projectors using belt-driven take-up and rewinds can be altered to take larger reels. In some cases the maker or some outside manufacturer will supply extension arms and, where necessary, extension "lifts" for the base so that the larger reel will clear the table. If these are not available, as is the case with 8mm. projectors, you can often make your own conversion.

How Clardy Did It

Randolph Clardy, of the Los Angeles 8mm. Club, for example, has converted his Eastman 8mm. projector to accommodate 400-foot reels. He simply cut off the arms carrying the feed and take-up spindles and lengthened them by bolting on a couple of heavy brass strips.

Reels—? He simply fitted the sides of 400-foot 16mm. reels to standard 200-foot 8mm. reel hubs!

But even if you don't do this at least show your audience the courtesy of saving your rewinding until after the show. Our modern projectors rewind very quickly, but none of them can rewind fast enough to avoid an intrusive mechanical disturbance in the flow of your entertainment.

Another of my friends, Cinefilmer Allen Smith of Los Angeles, suggests a helpful wrinkle to those who, whether with 16mm. or 8mm. equipment, use lamps of varying power, according to the size of picture to be shown.

Deflecting Leaks

He simply got an extra supply of the little metal caps that are fitted to the tips of modern projection globes. Instead of changing the cap each time he changes lamp globes he keeps a cap permanently on each globe. And each cap is marked to indicate the power of its globe.

If you've tried to decipher the markings on a slightly blackened projection globe you'll appreciate the value of this!

Another useful idea is to make a shield which will deflect the leaked light from the top of the lamphouse. With a cylindrical lamphouse, such as we find on Bell and Howell projectors, we can make a miniature stovepipe elbow of brass which will fit down over the lamphouse and deflect the light backward, without obstructing the ventilation.

With a square lamphouse, a flat piece of brass, rather like an apron in shape, can be cut out. The apron proper can then be folded to form three sides of a cube, while the apron string part of the metal can be used to clamp the hood on to the lamphouse.

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For either of these types the brass should be blackened chemically rather than painted, for the device will be exposed to considerable heat. To blacken the brass make one solution of 200 grains of copper nitrate in one ounce of water, and another of 200 grains of silver nitrate in an ounce of water. Mix equal parts of these, and place the brass in the solution for a few minutes, thereafter removing the brass and heating it.

Cleanliness is an important part of home movie showmanship. Before the show make sure the lens and aperture of the projector are clean and the film itself also is clean.

Here's a helpful aid in cleaning film: sew a square of lintless, soft cloth—flannel is best—to the thumb and forefinger of an old glove, preferably a left-hand glove unless you are a southpaw.

Show Complete Films Only

Finally, remember to practice showmanship in your program, as well as in the way you present it. Give your own films the advantage of being presented publicly only when they are complete—titled and edited.

If you are showing your own films on a "double feature bill" with professionally-made library films, arrange their order to give the advantage to your own photography. In other words, unless the professional films are old, or your own photography of definitely outstanding merit, show your own pictures first. They'll seem much better!

The same applies to double-billing monochrome and color. The color should follow the black-and-white, rather than precede it, for after a reel or two of color, monochrome seems to have something missing.

In many years of arranging club showings of prize films from the American Cinematographer's International Amateur Movie Contest I have found only one black-and-white film which could immediately follow color films and still create its full impression.

This is Tsukamoto's 1937 photography award winner, "Mount Zao."

Perhaps you have a monochrome film of equal virility. If you have here's hoping we will see it in this year's contest. But if you haven't remember in arranging home programs to play your strongest card last—and color is the cinefilmer's strongest card.

Los Angeles 8mm. Club

At the September meeting of the Los Angeles 8mm. Club the matter of insurance for camera equipment was fully explained by Ed Pyle.

Mr. Sievers of the Weston Electrical Instrument Corporation gave an interesting and instructive presentation of the methods of using his company's meters, including all models. There was wide discussion.

Mr. Hughett gave a demonstration of home processed film.

Bill Stull projected several reels of film that had been exposed by a friend on major studio locations, showing how members of a troupe pass the time between scenes.

Puppet Film Stirring

The Cinema has a sensational new "find"—no Scandinavian glamor girl this time, but a humorous new type of flexible rubber figurine to be featured in a Technicolor puppet film which promises to be as new to the film world as was "Snow White," according to Joseph Losey, its producer. The film will be presented at the Petroleum Industry Exhibition at the New York World's Fair.

The puppet characters, designed by Howard Bay, scenic designer and created and animated by Louis Bunin, noted puppeteer, are flexible enough to express the whole range of the emotions.

"They make possible a medium for film fantasy possessing all the appeal of the animated cartoon, but with three-dimensional depth and with greater mobility," according to Mr. Losey.

The illusion of animation for the film is secured by moving the puppets fractionally from one position to the next.

▼

One Cine Dream Comes True

(Continued from Page 427)

The loudspeaker will be directly under the screen, and this will be coupled to a major sound apparatus of high fidelity. Triple turntable phonographic reproduction apparatus will be available for use with silent film.

Pleasure and Business

"Apart from the enjoyment I get in showing personal films in the theater it is very useful for any professional work, and the room also is suitable for discussing pros and cons of clients' subjects," writes the builder.

The room is completely sound-proof, which means a sound film may be traveling over the reel and the resulting volume will not disturb the meditations or conversation of any others who may be remaining in the house proper. The walls are decorated in bright fashion.

A huge fireplace of red brick adds to the charm of the room. Concealed lighting may be dimmed from the operator's room. The specially sprayed screen is about 3½ by 4½ feet. It has been erected so as to be optically correct. To achieve this special attention has been paid to the position of the seats.

The screen is set off by an attractive proscenium opening. The front curtains will be worked by a motor direct from the projection room. This later department will delight the heart of any mechanical or film engineer. It is neatly arranged. Provision has been made for two machines.

Sound equipment is to be installed, if by this time it already has not been. In the lobby hang photographic awards, trophies of Mr. Chapman's photographic skill.

Acknowledgement is made to the Bournemouth Daily Echo, a part of whose story re-echoes in this description of the Chapman theater—and due credit and thanks are hereby extended.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of American Cinematographer, published monthly at Los Angeles, Calif., for October 1, 1938.

State of California } ss.
County of Los Angeles }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared George Blaisdell, who, having been duly sworn according to law, deposes and says that he is the editor of the American Cinematographer, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, and managing editor are:

Publisher, American Society of Cinematographers. Inc., Los Angeles, Calif.; editor, George Blaisdell, Los Angeles, Calif.; managing editor, George Blaisdell.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) The American Society of Cinematographers, Inc., Los Angeles, Calif.; Victor Milner, President, Los Angeles, Calif. No capital stock.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) GEORGE BLAISDELL, Editor.

Sworn to and subscribed before me this 21st day of September, 1938.

(Seal) JNO. A. ERNST, Notary Public.

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(My commission expires July 24, 1942.)

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